

 News & Notes
Business News

 Business Tech
BYOD Risks

 Personal Tech
Avoid Online Scams



It's What's Inside That Counts.

Intel-based tablets and notebooks
offer power and performance, while
Ultrabook™ convertibles give
students the best of both worlds.



On The Cover See pg. 7

Solutions from Intel®

Whether you're a student, a parent, or a business-person, you'll find that Intel® is powering a strong lineup of tablets and notebooks that can give you the power and speed that you need, while Intel-based Ultrabook™ convertibles give you the best of both worlds: the power of a high-performance laptop along with the convenience and portability of a tablet.



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Don't let the end of summer get you down. We'll help you close out the season in style, with a fun look at the best tech gadgets and also some useful tips to help you get more from your printer and improve your digital photographs.



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Business News



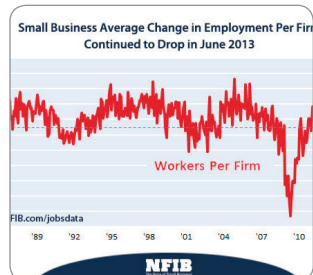
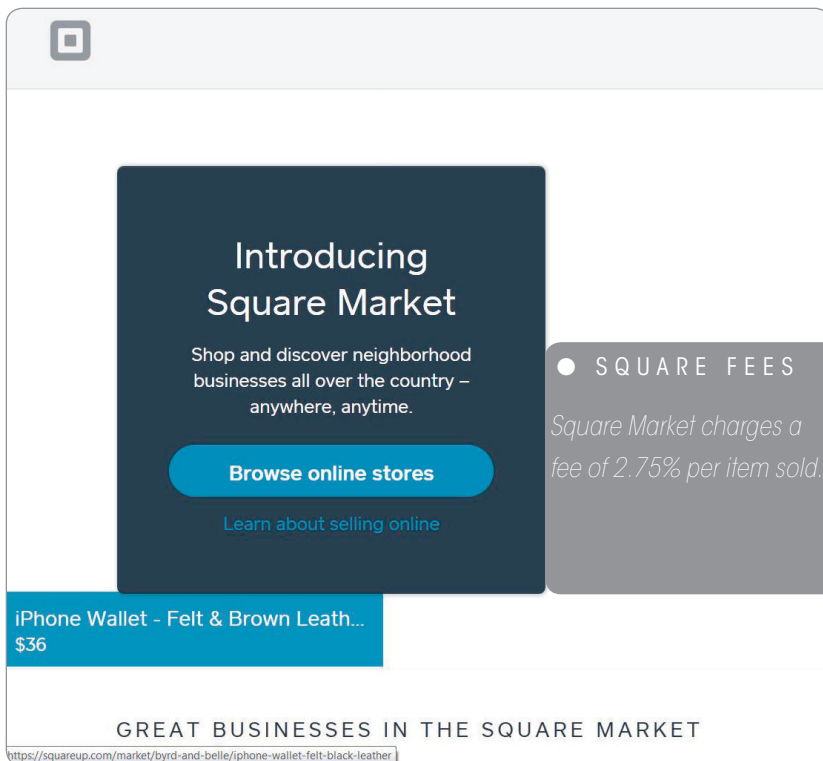
● Facebook will map ads to business objectives, such as in-store sales, online conversations, and app installs.

FACEBOOK ADS CHANGING

Good news for those who've tried to create a Facebook ad and found it difficult to select the right product. Facebook has announced that it will streamline its advertising products, going from 27 different choices to "fewer than half that." The goal is to simplify the process, and based on what you are trying to achieve, the ad tools will be able to automatically suggest the right combination of ad products for you. For example, when you create a Page post photo ad, Facebook will automatically add social context and eliminate the step of creating a sponsored story. Look for the changes to occur over the next six months.

SQUARE FOR SMALL BUSINESSES

Square Market is a new way for small businesses to sell products and services online, providing a way for you to create an online marketplace that sells things to people all over the country, not just nearby. You can create a Square Market store for free, including the ability to add photos and design a profile for your business. It's also possible to post items directly to Twitter, so followers can have new product info beamed out to them, and they can share it with their connections. Square Market charges a fee of 2.75% per item sold, and there's no charge to list an item.



Uncertainty about health care laws continues to have a negative impact on small businesses.

WEAK REPORT FROM SMALL BUSINESSES

The NFIB (National Federation of Independent Businesses) reports that "small firms are continuing to shrink." Some 12% of those surveyed reduced employment by a seasonally adjusted average of 4.3 workers. Offsetting the negative news was that 11% reported adding an average of 3.6 workers. The NFIB indicates that the net loss is 0.09 workers per firm. The other 77% of respondents made no change to employment. NFIB believes that part of the weak reading is due to uncertainty about health care laws, which may have a big impact on small businesses. On the plus side, job creation plans rose two points, netting a 7% increase in potential employment.



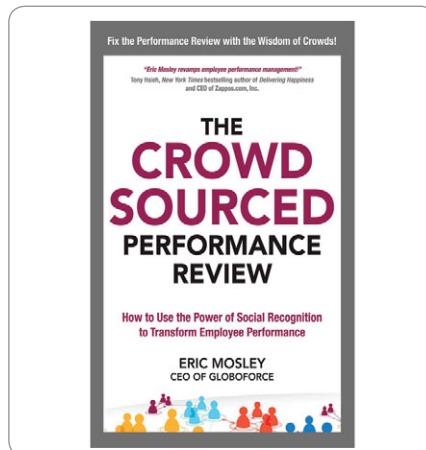
● Google Web Designer is a tool that will help you create HTML 5 banner ads and other Web content.

GOOGLE WEB DESIGNER

Google announced that it has created Google Web Designer, a free HTML5 creative design tool that will allow you to produce cutting-edge online banner ads, as well as Web content. Google Web Designer will be integrated with DoubleClick Studio and AdMob to simplify the process of building HTML5 content for Google platforms. The HTML5 will make it easier for you to create ads that will work on both desktop and mobile platforms. Google didn't provide a timeline for when Web Designer would be available.

NEW EMPLOYEE REVIEW TACTICS

The Crowd Sourced Performance Review is a new book that's designed to innovate the way you review an employee. The basic premise is that you can gather collective feedback from managers and employees across the company to generate more accurate, actionable results for employee evaluation. Written by Eric Mosley, the book teaches you how to create a review system that includes the feedback of many, using social recognition, in which employees recognize quality work on a daily basis. The practice will also help you reach an ultimate goal of a positivity-dominated workplace. Mosley is the CEO of Globoforce and has been published in *Forbes*, *Fortune*, and *TIME* magazines.



● Mosley's book tells you how to gather collective feedback from managers and employees across the company to generate more accurate, actionable results for employee evaluation.

● SMALL BUSINESS EVENTS

Small business events give you a chance to learn critical management skills and network with professionals in related fields. Don't miss these upcoming opportunities. If you would like to see your event here, email editor@smartcomputing.com with the subject Small Business Event.

CONTENT MARKETING WORLD 2013

Cleveland, Ohio | September 9th - 12th, 2013
<http://contentmarketingworld.com/>

LEADING IN LOCAL: SMD DIGITAL MARKETING

Austin, Texas | September 11th -13th, 2013
www.biakelsey.com/leadinginlocalAustin/

MACs WOMEN'S ENTREPRENEUR SUMMIT

Westchester, NY | October 4th, 2013
www.macswomensummit.com/

THE SMALL BUSINESS EXPO (BOSTON)

Boston, Mass. | October 17th, 2013
www.thesmallbusinessexpo.com/

2013 SMALL BUSINESS CONVENTION

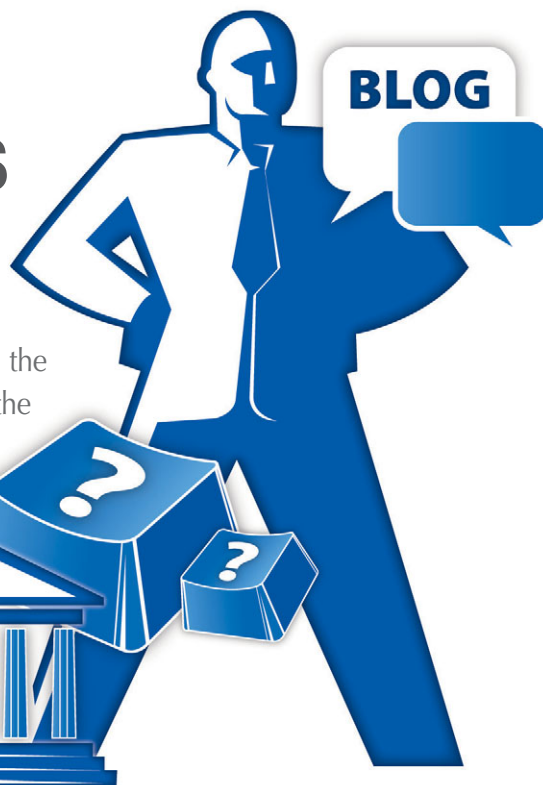
Sandusky, Ohio | October 24th & 25th, 2013
<http://smallbizconvention.com/>

THE SMALL BUSINESS EXPO (LOS ANGELES)

Los Angeles, Calif. | November 7th, 2013
www.thesmallbusinessexpo.com/

Small Business Resources

The Web has a trove of resources for SOHOs (small and home offices) and small businesses—if you know where to look. Find an association that can help you meet your goals; get information from the government about loans, grants, and taxes; and stay up-to-date with the best small business newsletters and blogs. If you have a pressing question, pose it on a forum to see what your peers have to say.



ASSOCIATIONS & SUPPORT

Better Business Bureau
www.bbb.org
(703) 276-0100
4200 Wilson Blvd.
STE 800
Arlington, VA
22203-1838

Main Street Alliance (MSA)
mainstreetalliance.org
info@mainstreetalliance.org
(603) 831-1835
3518 S. Edmunds St.
Seattle, WA 98118

National Federation of Independent Businesses (NFIB)

www.nfib.com
(800) 634-2669
(615) 872-5800
53 Century Blvd.
STE 250
Nashville, TN 37214

National Small Business Association (NSBA)

nsba.biz
(202) 293-8830
1156 15th St., STE 1100
Washington, DC 20005

SCORE

www.score.org
(800) 634-0245
(703) 487-3612
1175 Herndon Pkwy
STE 900
Herndon, VA 20170

Small Business Development Centers Network (SBDNET)

www.sbdnet.org
(800) 689-1912
501 W. Durango Blvd.
San Antonio, TX 78207



BLOGS

Signal vs. Noise

37signals.com/svn/posts

Small Business Search Marketing

www.smallbusinesssem.com

Small Biz Bee

smallbizbee.com

Small Business Trends

smallbiztrends.com

The Small Business Blog

www.sme-blog.com

The Entrepreneurial Mind

www.drjeffcornwall.com



FORUMS

Small Business Administration Community

www.sba.gov/community

The Small Business Community Forums

www.smallbusinessforums.org

Small Business Ideas Forum

www.smallbusinessbrief.com/forum

The Young Entrepreneur

www.youngentrepreneur.com/forum



GOVERNMENT

Grants.gov

House Committee On Small Business

smallbusiness.house.gov

Small Business and Self-Employed Tax Center

www.irs.gov/businesses/small

Small Business Administration (SBA)

sba.gov

U.S. Copyright Office

copyright.gov

U.S. Department of Labor

dol.gov

U.S. Senate Committee on Small Business & Entrepreneurship

sbc.senate.gov

Small Business Development Centers

Assistance For Entrepreneurs

Haven't the foggiest idea how to harness your entrepreneurial spirit, pull yourself anywhere using bootstraps, or think in or out of a box? Starting and running your own business is tough, but fortunately for prospective and current small business owners, SBDCs (Small Business Development Centers; asbdc-us.org) dispense with the clichés and offer training, counseling, and other assistance to help you craft your vision into a real-world success.

Run A Small Business

Pooling resources from federal, state, and local governments, as well as the private sector and the educational community, The Association of Small Business Development Centers is truly a joint venture with a vested interest in fostering small business growth. For an overview of what the SBDC can offer you and your small business, visit bit.ly/dKYe2a. The SBA (Small Business Administration; www.sba.gov) is partnered with SBDCs.

Help On Your Turf

You may be surprised to learn that there's probably an SBDC branch nearby; there are locations in all 50 states, in the District of Columbia, Puerto Rico, and even in the U.S. territories. There are 63 nationwide Lead Small Business Development Centers coordinating program services for every sub-center and satellite location in each state. Centers are made up of directors, full-time staff members, and various part-time staff and volunteers.

The best way to contact your nearest SBDC is to visit the Association of

Small Business Development Centers' Web site (asbdc-us.org), input your ZIP code into the Find Your Nearest Small Business Development Center text box, and then click Go. The results page will highlight Lead Centers but rank centers in order of those closest to your location. Often, SBDCs partner with universities and colleges, and tend to be found on campuses across the country. On the search results page, you'll also find a link to the local office's Web page,

Frequent Question

If you're like many other people starting a small business, funding is at the top of your mind. A common question that entrepreneurs have for SBDCs is: "Am I eligible for grant money?"

The answer depends on the nature of your business. Grants.gov (www.grants.gov) will give you a clear picture of your options before your visit to a Small Business Development Center.

email address, phone number, a fax number if available, and address.

The Closest Thing To A Free Lunch

The services offered may vary by location, but all SBDCs offer many services free of charge. Some typical services you can expect from your nearest SBDC include help with financial, marketing, production, or-



ganization, engineering, and technical problems and access to feasibility studies that can flesh out a fledgling business plan. Some SBDCs also offer affordable training seminars to help with various aspects of running a business. You can also rest assured that your business with the SBDC will remain confidential.

Women's Business Centers

The SBA offers WBCs (Women's Business Centers), which directly serve female entrepreneurs through nearly 100 educational centers nationwide. This organization strives to assist women in overcoming the hurdles they face in today's business environment by offering business management training and technical assistance to all women, with a special emphasis on economically or socially disadvantaged women. The services and training programs are also commonly offered in multiple languages to enable those who speak English as a second language or are still learning English. To find your nearest WBC, visit bit.ly/hs3st2.

Small Business, Big Payoff

Small business owners know that achieving success is about taking risks, innovating, and making tough decisions day in and day out. Thanks to the services offered at the SBA, SBDCs, and WBCs, you're not on your own. ●



A New Study Partner

The Perfect Portable PCs & Tablets For Students

Organized activities, sports, and other responsibilities mean that kids don't always have time to sit down and do homework in front of a desktop PC. A new tablet or Ultrabook™ will ensure that students will be able to take notes, do research online, and create reports wherever they go.

Students can also use a tablet or Ultrabook™ to collaborate on projects, keep in touch with friends and family via email or video chat, and read eBooks. When shopping for a portable PC or tablet, look for models with Intel® processors to ensure app compatibility and to provide long battery life and reliable performance.

Tablets

Windows 8 tablets with Intel® processors can run the same applications found on a traditional desktop computer, so you won't need to find workarounds just to view and edit documents. For example, the Acer ICONIA W3-810-1416 comes with Microsoft Office Home & Student 2013. Its Intel® Atom processor can easily handle a student's typical workload, including research tasks, email, document creation, and presentations. An Intel® tablet experience includes support for a wide-variety of touchscreen gestures, including zoom, rotate, two-finger tap, and pan.

Another bonus of combining Win8 and Intel®-based tablets is that students will be able to connect peripherals, such as a USB mouse, keyboard, or printer, for complete connectivity with the accessories they use the most. The 8.1-inch ICONIA W3-810-1600, for instance, comes with a micro USB 2.0 port, a micro HDMI port,



and 3.5mm combo headphone/speaker output. Most Intel® tablets also provide extended battery life, often eight hours or more, and it turns on quickly from standby. Thus, students won't need to completely shut down the tablet just to save battery life, and when they turn it back on, the tablet will be up and running again in seconds.

Intel® tablets also support Microsoft Connected Standby: The device will appear to be off, but will be running in the background to allow for your email, social network, and other apps to constantly be refreshing and updating. Tab-

lets are ideal for students whose primary concern is mobility, because they are slightly lighter and smaller than an Ultrabook™.

Ultrabook™

Some students need a machine capable of quickly editing video and images to be used for projects and presentations. These students will likely want something with a little more power than a tablet. An Ultrabook™ is a notebook built around top-notch Intel® specs to deliver speedy performance and fast responsiveness. The Lenovo U310, for instance, is an UL-



trabook™ that features an Intel™ Core i5-337U processor with Turbo Boost 2.0 that gives the CPU a burst of speed when running demanding applications. Even better, it offers portability near that of a tablet, because an Ultrabook™ is always less than an inch thick. Your teen or college student will also like that an Ultrabook™ offers a full-size keyboard for entering notes and composing documents; this provides a much more comfortable way to type for long periods of time compared to using an on-screen keyboard.

Most Ultrabook™ devices also come with larger hard drives than what you'd find a tablet. The expanded storage is handy because it provides the space necessary for storing your personal music and image collections—not to mention class presentations and school documents. Lenovo's U310 comes with a 500GB drive for storage, and a 24GB SSD cache to ensure that your most frequently accessed files come up in seconds. Lenovo designed U310 Ultrabook™ with a 13.3-inch HD LED backlit screen. The big, sharp screen will come in handy whether the student is displaying presentations in class or watching videos with friends.

Ultrabook™ Convertible

An Ultrabook™ convertible offers the best of both worlds: tablet-like portability, combined with Ultrabook™ power and convenience. A convertible can transition from a clamshell-type laptop to a touch-oriented tablet in seconds, so it can serve as either a tablet or an Ultrabook™ system. It's ideal for college students, because they'll be able to tap into the high performance power of the Ultrabook™ without missing any of the convenience of a touchscreen tablet. For example, the Lenovo Yoga 13 IdeaPad can



switch between laptop, tablet, tent, and stand modes, because the screen can flip a full 360 degrees. Lenovo also includes a Motion Control feature that lets you flip through photos and Web pages or rewind/fast-forward music with a flick of your hand.

The Lenovo Yoga 13 is a mere 0.67-inches thin and weighs only 3.4 pounds; yet, inside you'll find an Intel® Core i5 processor with Turbo Boost 2.0 technology. The lightweight design means that it won't be an issue for a student

to take the Ultrabook™ to class. The Intel® processor's speed also allows for gaming breaks and other entertainment on the mobile workstation. For example, the Lenovo Yoga 13's 1,600 x 900 IPS display and Intel® graphics makes for an enjoyable gaming experience. Built-in Intel® Wireless Display also lets you smoothly stream video from your Ultrabook to a big screen—ideal for class presentations or a photo slideshow for the family. ●

The AIO Option

If you're looking for a computer for the dorm room, consider an All-In-One PC powered by Intel®. Like an Ultrabook™, AIOs can automatically ramp up performance when necessary and are available with touchscreens. You can also select from a wide variety of screen sizes; larger models are perfect for doubling as a TV that streams online videos and music in the dorm room. Many can also be wall mounted to save space.

Notebook

IdeaPad® U310

IdeaPad U310
 Model: 59365302
 Staples Item: 141488



Ultra responsive. Ultra sleek. Ultrabook™. Inspired by Intel. Now you won't sacrifice power for beauty - experience the joy of performance that keeps up with you.

The IdeaPad U310 Touch is a thin and light Ultrabook™ that comes with a 10-point multi-touch display and a range of ultra responsive technologies for a simplified user experience while on the go.

- 3rd gen Intel® Core™ i5-3337U Processor plus Turbo Boost Technology. Enjoy an automatic burst of speed when you need it with Intel® Turbo Boost Technology 2.0
- Windows 8
- 4GB DDR3 Installed Memory
- 500GB HDD Storage & 24GB SSD Cache
- 13.3" HD LED backlight (1366 × 768) display with 10-point multi-touch, 16:9 aspect ratio
- Integrated Intel® 4000 HD graphics
- Instant Resume - Wake up your PC from Sleep mode in just over a second
- Stereo Speakers with Dolby Home Theatre v4 audio certification for immersive sound
- Enjoy greater accuracy with the 10-point multi-touch display optimized for the new Windows 8 interface
- Long Life Battery for extended use on the move; up to 6hrs
- AccuType keyboard with individual rounded keys for comfortable and accurate typing

lenovo® **FOR**
THOSE
WHO DO.

Printer-Anywhere Portability

Canon® PIXMA® iP100 Photo Printer

This versatile Canon PIXMA iP100 photo printer produces beautiful photolab-quality pictures or high-quality ordinary prints. You're not limited to standard small print sizes, either; a PIXMA printer can handle sizes up to 8.5 inches by 14 inches.

- Prints 9.0 ppm black, 5.9 ppm color (ISO-based)
- Prints 4" x 6" photos as fast as 50 seconds
- Prints up to 9600 x 2400 color dpi, for spectacular detail and clarity
- 8.5" x 14" maximum printable area
- Built-in Auto Image Fix feature helps you produce amazing results on all your photos



Canon® PIXMA® iP100 Photo Printer

Model: 1446B002BA

Staples Item: 734642

World's Smallest and Lightest DSLR

Canon EOS Rebel SL1 DSLR

As the world's smallest and lightest DSLR*, the new EOS Rebel SL1 camera body is 4.6" (w) x 3.57" (h) x 2.74" (d), and weighs approximately 13 ounces.

- 18.0 megapixels
- High-speed continuous shooting up to 4.0 fps allows you to capture the action
- EOS Full HD Movie mode with Movie Servo AF for continuous focus tracking of moving subjects, manual exposure control and multiple frame rates, built-in monaural microphone, manual audio level adjustment, and Video Snapshot with editing for expanded movie shooting options



Canon EOS Rebel SL1 DSLR

Model: REBELSL11855

Staples Item: 61629

Easy Viewing, Amazing Memory, Speedy Processing

Sony Dual Core I5 15 1/2" Laptop

Checking reports and entering information to help you keep an eye on your business is easy with this Sony 15.5-inch dual-core i5 laptop. It features Windows 7, so this laptop is compatible with almost any program you will need to use for your company. A nice-sized screen, fast processor, and generous memory make getting your work done easy.

- Dual core i5 2.6 GHz 3MB
- 8GB DDR3 SDRAM installed memory, expandable to 12GB
- 500GB 7200 RPM hard drive
- 15 1/2" HD LED-backlight (1920 x 1080)
- Windows 7



Sony Dual Core I5 Laptop

Model: SVS1513AGXB

Staples Item: IM1RB3081

SONY
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Print, Copy, Scan, Fax

HP Officejet Pro 8600 e-All-in-One

Produce professional color for up to 50% lower cost per page than lasers, accelerate productivity with apps on the large touchscreen, networking options & versatile e-all-in-one performance. HP ePrint easily allows you to print from a mobile device.

- **SAVE SPACE** - A small business machine providing increased functionality without having to buy multiple machines
- **QUALITY PRINTS** - With 4800 X 1200 optimized dpi resolution your documents and reports will be crisp and clear even using plain printer paper
- **EASY-TO-USE FEATURES** - Take advantage of automatic duplexing to print front-and-back documents



HP Officejet Pro 8600

Model: CM749A#B1H

Staples Item: 366000



The Family Unit is here!

Dell Inspiron 660 Desktop PC

Make the Inspiron™ 660 your entertainment hub. With four USB 3.0 ports, an 8-in-1 media card reader and HDMI™ capabilities, connecting to cameras, mp3 players, printers and other peripherals and accessories is quick and easy.

- Intel® Pentium® G2030 (3.0GHz, 3MB Cache) Processor
- 4GB Memory (DDR3, 1600MHz)
- 1TB Hard Drive (7200RPM)
- DVD+/-RW Drive
- Windows® 7 Home Premium (64-bit)



Dell Inspiron 660 Desktop PC
Model: i660-3048BK
Staples Item: 204040

Printer, Scanner, Fax, and Copier

Brother Inkjet All-In-One Printer

Stop cluttering your desk with different devices and try this handy four-in-one printer instead. This impressive machine has everything that you need to finish your work, from an inkjet printer to a high-quality scanner.

- Prints 12 ppm black, 10 ppm color; copies 6 cpm black, 6 cpm color (ISO-based)
- Built-in wireless 802.11b/g/n network and USB 2.0 interfaces
- Automatic duplex printing (2-sided printing)
- Prints up to 6000 x 1200dpi resolution
- 4-cartridge ink system
- Direct photo printing on demand from your media cards, PictBridge-enabled camera, or USB flash memory drive



Brother® Inkjet All-in-One Printer
Model: MFCJ625DW
Staples Item: 358114



Touch Screen Convertible Laptop

Yoga 13 (i5 Processor)

Introducing Lenovo IdeaPad Yoga 13, the revolutionary laptop that offers a touch screen experience of a tablet along with the productivity and efficiency of an Ultrabook™.

- Powerful 3rd generation Intel® Core™ i5-3337U 1.8GHz (up to 2.7GHz) 3MB L3 Cache Processor
- 4GB DDR3 memory
- 128GB SSD storage
- 13.3" HD+ (1600 x 900) IPS display with wide viewing angle; 10-point capacitive multi-touch
- Equipped with Windows 8, perfect for productivity and play
- OneKey® Rescue for fast recovery and protection
- Ultraportable design – .67" thick and 3.3 lbs.



Yoga 13
Model: 59359567
Staples Item: 141486

Ideal For The Space-Constrained Home Office

Epson WorkForce Color Inkjet All-in-One Printer

Ideal for the space-constrained home office, the WorkForce WF-2540 is a fast, high-performance all-in-one that offers affordable, individual ink cartridges and a space saving, compact design - the smallest in its class.

- 4-in-one: print, copy, scan, fax
- Easily print from iPad, iPhone, tablets, smartphones and more
- Easy navigation - 2.5" LCD makes it simple
- Do more -30-page ADF to quickly copy, scan or fax stacks of originals
- Built-in wireless and Ethernet networking



Epson WorkForce WF-2540
Model: C11CC36201
Staples Item: 954262

Mechanical Gaming Keyboard

Corsair Vengeance K60 CH-9000004-NA

The Corsair Vengeance CH-9000004-NA K60 Performance FPS Mechanical Gaming Keyboard is designed for performance gaming and has a cherry MX red key switches, which provides the sensitivity and low operating force that professional gamers love.

- Connectivity technology: Cable
- Host interface: USB 2.0
- Black/silver
- Features: Ergonomic wrist rest, soft-touch keys; cherry MX red mechanical key switches; contoured, textured WASD and 1-6 keycaps; full key matrix anti-ghosting; 20-key rollover (20KRO) on USB; english localization; Windows lock keys.



Corsair Vengeance Performance Gaming Keyboard
Model: CH-9000004-NA
Staples Item: IM1LE8030



Silent 140 mm Fan

Cooler Master[®] NotePal ErgoStand Cooling Stand

ErgoStand Basic - a budget-friendly alternative solution that can provide you with cooler notebook computer temperatures and extensive control over workplace ergonomics.

- Supports laptops up to 17"
- Five-position height adjustment allows you to select the most suitable position for viewing / typing angles
- Fan Dimensions: 15 mm (H) x 140 mm (W) x 140 mm (D)
- Fan speed: 1400(+/- 15%) rpm / Fan airflow: 65 cfm
- Fan noise level: 21 dBA
- USB: 1 x USB 2.0/1.1
- Power supply: USB 5 VDC



Cooler Master Cooling Stand
Model: R9-NBS-4UBK
Staples Item: IM1PW2372



Your Words. Your Ideas. Any Time, Anywhere.

Livescribe™ Sky 2GB Wifi Smartpen

The Sky Wifi smartpen is the perfect pen for today's always-on, connected world. It syncs all your handwritten notes and any recorded audio to your free Evernote account, allowing you to have quick and easy access to the information that matters to you, any time, and anywhere. Now, all your important notes, graphs, and diagrams are at the tip of your fingers, so you can review, search, and organize your notes from Evernote on any of the devices you use, including PC, Mac, iOS, and Android devices.

- Smartpen Remembers So You Don't Have To
- From Paper, Directly To Your Digital World
- Any Time, Anywhere Access To Your Notes



Livescribe Sky 2GB wifi Smartpen

Model: APX00010S

Staples item: 120933

Get More Out Of Your Computer

Kingston V300 Solid State Drive Kit

Kingston's V300 solid-state drive (SSD) is a cost-effective way to revive your computer. SSDs are 10x faster than a hard drive plus more reliable, more durable and shock proof

- 120GB
- 1 x 7 pin SATA 600
- 2 1/2"
- Drive type: Internal
- External drive transfer rate: 600Mbps, Internal transfer rate: 450Mbps (read), 450Mbps (write)
- Fast, high quality, reliable, economical, multiple capacities
- Includes: 2 1/2" USB enclosure, hard drive cloning software (CD), installation video (DVD), 7 mm to 9.5 mm adapter



Kingston V300 Solid State Drive Kit

Model: SV300S3N7A/120G

Staples Item: IM1QM6575



Listen to what you like, drown out the rest

Sony Noise Canceling Headphones

Tune out the hectic world outside as you lose yourself in the sumptuous sounds and extreme comfort of Sony's noise canceling headphones. Listen to your music, not the plane, train or noise around the office.

- Reduce ambient noise (10db at 300Hz), and provide a quieter environment to enhance audio entertainment
- Slim swivel folding style for easy storage
- Convenient monitor switch located on the battery box turns noise canceling ON/OFF
- Uses 1 AAA battery (not included)
- Pouch and in-flight plug adapter included



Sony Noise Canceling Headphone

Model: MDRNC7/MDRNC8

Staples Item: 710246

SONY
make.believe

Get A Pop Of Color

Belkin, Samsung Galaxy S4 Case

The View Case protects the buttons on the sides of your Samsung Galaxy S4 while keeping your ports, speakers, and camera fully exposed. Quickly and easily adjust your volume, plug in your headphones, snap a photo, and connect your charging cable while keeping your case on and your phone fully protected.

- Fully transparent polycarbonate back
- Sorbet
- Full button protection
- Wraparound frame protects screen from scratches
- Allows full access to all controls, ports, and camera



Belkin View Case

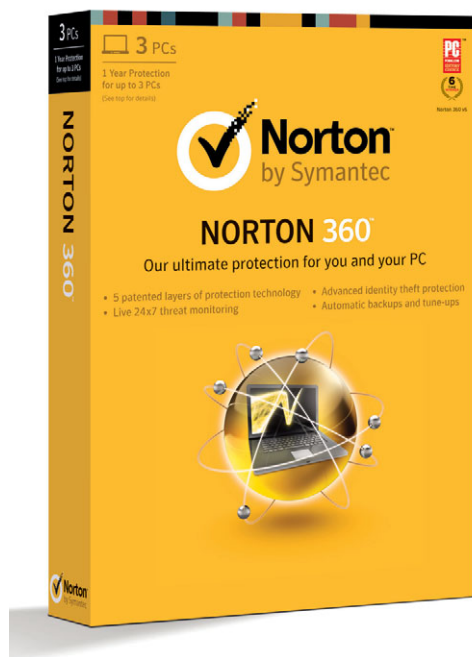
Model: F8M565bt002

Staples Item: 62000

belkin.

Ultimate Protection For You and Your PC

Norton 360™



Norton 360
Model: 2DDCVXMX74MMUPB
Staples Item: 960837

Norton 360™ provides top-ranked protection, automatic backup, and tune-up tools to help keep you safe from threats, guard your files against loss, and optimize PC performance¹. Our five patented layers of protection eliminate threats before they can reach your PC, so you can freely surf, shop, socialize, and share online without worry. Automatic backup lets you restore files in case of a hard drive crash. And PC Tuneup keeps your computer running fast and trouble-free.

- Provides a single, comprehensive solution that protects you from threats, guards your files against loss, and optimizes your PC's performance
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- Automatically backs up your files—so you don't have to remember to do it—without getting in your way
- Cleans up and tunes up your PC to keep it running fast and trouble-free
- Protects without slowing you down or getting in your way
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¹Some protection features are not available in Windows 8 style browsing mode



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Staples Item: 167670



Focus On Digital Photography

Improve Your End-Of-Summer Photos

All summer long, your digital camera followed you wherever you went, capturing memories and cataloging experiences. Now that you finally have a chance to examine the resulting images, you may find yourself wishing they were a little higher resolution, or that your camera had better low-light performance, more presets, higher optical zoom, more user-friendly features, or a slimmer, more portable form factor. Perhaps it's time to upgrade your memories with a new camera.

For a device whose primary function is to take photos, digital cameras can seem to be needlessly complex. Yes, buying a new one means familiarizing yourself with the jargon. But no, it's not too difficult for even a technology novice to walk out of the store with a new digital camera that will serve him well for years to come. Read on for an overview of what you need to know to buy that perfect digital camera and make the most of it.

Image Sensors

The critical image-capturing component of a digital camera is the image sensor, and there are two types: the camera will have either a CMOS (complementary metal-oxide-semiconductor) or a CCD (charge-coupled device) image sensor. These are integrated circuits that convert light into voltage and then into the digital information that constitutes the image. A camera's megapixel rating tells you how many photosites (pixel sensors) its image sensor contains. But the *quantity* of photosites is only half of the image quality story. Larger image sensors allow room for physically larger photosites. As a result, with a larger sensor, more light can be gathered through the camera's lens to produce cleaner image results. This is



The Canon EOS Rebel T3i Digital SLR lets novices use scene settings for great-looking images and lets aspiring professionals dig deep with the manual controls.

why a DSLR (Digital Single Lens Reflex) camera with a 10-megapixel rating will tend to capture images that are superior to those from a point-and-shoot camera that *also* supports a 10-megapixel resolution; the DSLR's sensor is larger, even though the resolution is the same.

In general, cameras with large-diameter lenses tend to have big image sensors (although you should check their specs to be sure). For example, a DSLR will tend to have a larger image sensor than most point-and-shoots.

Aside from the specifications, looking at the photos a digital camera takes is a good way to determine the quality of its image sensor. A decent image sensor is capable of capturing clear blue sky with little to no graininess; this indicates a high signal-to-noise ratio. Another photographic indicator of a good image sensor is shadows that lack a "blooming effect," or bright areas. This shows that the image sensor is capable of a high dynamic range. Image sensors that work well in the dark will tend to have a high ISO rat-



This image was taken using the camera's lowest ISO setting, 80. It comes out crisp and clear, if a little dark.



This image was taken using a fairly high ISO setting, 1600. The result is brighter, but grainier.

ing equivalence, such as 3200 or higher.

Optical Vs. Digital Zoom

When you're shopping for a camera or camcorder, you'll notice that most models feature both an optical zoom and digital zoom specification. It's important to understand the difference between these two types of zoom and how they affect image quality.

Optical zoom uses only the camera's lenses (optics) to magnify your view. The camera lens physically moves in order to magnify the subject so that it appears closer. When a camera uses optical zoom, it will snap an image utilizing its maximum amount of pixels and visual detail, regardless of how far away the subject is; go ahead, zoom all the way in and snap away. You may notice that optical zoom delivers sharper

and smoother results than digital zoom. The higher the optical zoom number (such as 10X or 40X), the better. Long telescoping lenses are a dead giveaway that the associated camera has a particularly high optical zoom. Most point-and-shoot cameras have push-button optical zooming, whereas many DSLRs let you zoom manually using a ring on the lens itself.

Digital zoom, on the other hand, launches after you've zoomed in as far as you can with a camera's optical zoom. Digital zoom may *appear* to zoom in closer, but in actuality, the camera is simply enlarging the center of your image. As the camera digitally magnifies your image, it inserts pixels to smooth out jagged edges. Image results may appear softer, and individual pixels are likely to be noticeable when you enlarge your picture. Using

digital zoom can degrade image quality, so we recommend using it sparingly and basing your purchase decision on optical zoom instead.

Manual Settings

If you only shoot photos of similar subject matter, with consistent light levels, and the camera mounted to a tripod, then you can feel free to set it and forget it. For all other instances, the pros will rely on manual settings.

To get the best results for your photos, it pays to learn a little about a camera's manual shutter speed settings and light sensitivity (ISO). But turning off autopilot with your digital camera requires that you constantly adjust your camera as you're shooting to adjust for the environmental conditions.

Many of the best spontaneous photo opportunities happen in the evening or indoors where



The Lenmar DLO40B is a replacement battery that works in a number of different digital cameras.



The Canon Speedlite 430 EX II is a flash accessory that ensures your photos always have enough light.

light is low. Pros and advanced photographers often use slower shutter speeds to give their cameras time to gather more ambient light and tripods to avoid motion while the shutter is open. Keep in mind though, that as you increase ISO, you'll also be adding graininess to your images. Experiment with higher ISO ratings to find the perfect balance between image clarity and graininess. High ISO ratings are also good for capturing fast action without blurring. Some examples of situations where a high ISO may result in great images include indoor sports events, concerts, art galleries, churches, parties, wherever a flash is ineffective or not allowed.

The more light illuminating your subject, the more quickly your camera will be able to gather the light necessary to produce a photo with little or no graininess.

For these situations, a fairly low ISO of 100 is typical. The camera's flash lets it lower the ISO in dark situations, but this can tend to leave the background particularly dark. Using the camera's fill flash settings can negate this effect to some extent.

Although most digital cameras come with a built-in flash, there are those that support electronic flash accessories. If you take a lot of low-light photos, it pays to invest in a flash accessory with a fast recycle time, which lets you quickly take follow-up shots. Another benefit of flash accessories is that often you can increase and decrease the bulb intensity or attach a diffuser accessory to it. Professionals and those aspiring to become professionals tend to use photographic reflectors or a mounted lamp in a softbox to get the lighting just right.

If you plan to buy any flash accessories, remember to also buy and bring along a few extra batteries for these power-hungry components.

Scene Settings

Even though the camera's manual settings can deliver superb photos under virtually any conditions, most of us aren't armchair Andy Warhols, recliner Rembrandts, or La-Z-Boy Leonardo Da Vincis. Beginner or intermediate photographers prefer to spend more time living the moment than worrying about how best to capture it. For this reason, any digital camera you buy will come with a handful or more of automatic scene settings. Scene settings (also called scene modes) adjust all of the camera's settings to best capture specific types of shots: evening photos, fast-motion sports,



The Lowepro Adventura Ultra Zoom 100 Camera Bag can protect your DSLR and it has numerous pockets for other accessories.



The SanDisk 16GB Ultra SD Card is capacious enough to hold thousands of photos and hours of video.

glare-filled snowscapes, bright, sunny beaches, and more.

The most basic scene modes you're likely to encounter on even entry-level digital cameras include portraits, landscapes, and night shots. The night shot scene setting, for example, automatically increases the exposure time, which lets more light in. Many digital cameras also offer more sophisticated settings to capture specialty photos, such as fireworks, kids and pets, or sports. While you're concentrating on getting the picture you want, a camera with scene settings will take care of the technical details.

Extras

When shopping for a digital camera, don't make the mistake of blowing your entire budget on the unit itself; there are several peripherals you'll need to make

your images look their best, protect your investment, stay powered, and hold the thousands of high-resolution images you'll be shooting.

Tripod. A tripod keeps your camera steady while you're shooting close-up or distance shots. It also lets you use your camera's timer to snap group portraits. A tripod is also key to recording steady video. It can smooth out panning and tilting shots, too. Using a tripod for shots with long shutter times is the key to keeping them blur-free.

Case. A protective case keeps your camera safe from bumps, scrapes, and even light moisture. A form-fitting case is great for a point-and-shoot camera. For larger cameras, buy a padded camera bag with pockets for spare batteries, memory cards, extra lenses, and more.

Batteries and chargers. Make sure you're never caught without the power needed to capture that perfect moment. Keep at least one fully charged spare battery in your camera bag. Also, a 12V vehicle battery charger will give you the flexibility to power up your camera batteries anywhere you're headed, even if you're on the road.

Memory. Keep spare memory cards on hand so you can snap away without having to worry about running out of storage space. Consider buying several memory cards with smaller capacities instead of one card with a larger capacity; that way, if something goes wrong with one card, you'll still have a fallback option.

Wi-Fi. If you're the type that only empties your memory card onto your PC or other media after you encounter the Memory Card



The Educational Insights GeoSafari Tuff Cam Tripod is portable enough to fit into most camera bags.



The Fuji XP55 Digital Camera can take a tumble, get wet, chill out, and still make sure you don't miss a shot.

Full message, you're not alone. To avoid this, look for a camera that comes with Wi-Fi support, which can let your camera automatically upload your photos and videos to your computer or a Web site without a cable.

Face detection. People's faces are often the most important elements in our photos; a camera with face-detection technology uses the faces of friends and loved ones as reference points when it automatically sets its focus and

exposure settings. This ensures that everyone looks his best.

Image stabilization. How often do you carry around a tripod? We shoot the vast majority of our photos with a handheld camera. Enabling any form of image

Photography 101

Digital cameras are great for cataloging all of those one-of-a-kind experiences, and school is no exception. This year, make sure there's one stowed in the backpack as you or someone you love heads back to class. There are many ways having a digital camera handy can provide an academic advantage, opportunities for social engagement, hours of recreational enjoyment, and—of course—a fun way to keep Mom, Dad, and friends and family up-to-date on everything happening on campus.

For any student studying the visual arts, having a digital camera on hand is practically a prerequisite. Photography students, in particular, will require a fairly sophisticated DSLR that will not only give them a good foundation to start with, but also offer more advanced functions that will let them compete with the pros once they've learned the fundamentals of photography. They'll also need an armful of other equipment, including a tripod, additional lenses, a quality carrying bag, spare memory cards, and spare batteries.

Other students can also benefit from having a digital camera. Group projects, social events, photojournalism, study abroad sessions, sporting events, concerts, and those weekend camping trips are all great examples of why your student should be toting a camera. If you think a smartphone camera is sufficient, compare the results and you'll quickly realize that there's really no comparison.

stabilization is good, but to ensure your images look their absolute best, look for a camera with dual-image stabilization, which will optically and digitally steady your shots to prevent blur caused by camera shake.

Touchscreens. It's easier to capture those fleeting moments when you don't have to stop and navigate your camera's menu settings. Cameras that have touchscreen displays deliver intuitive control with icons and gestures such as pinching to zoom.

Ruggedized cameras. Durable cameras aren't simply for extreme sports enthusiasts, but for anyone who wants a camera that can reliably withstand a dip under water, cold temps, sandy beaches, and accidental drops. Not surprisingly, durable cameras have become quite popular with parents of small children. They tend to feature shock-resistant internal components, rubberized shells, and waterproof housings. Even though these cameras can roll with the punches, make sure to read their



A fisheye lens like this one from Rokinon can help you capture wide-angle landscapes and more.

tolerances carefully before you try to take them for a swim or on an adventure in a harsh environment.

Filters and flashes. Because lighting directly impacts the appearance

of a photograph, accessories such as camera filters and flashes can brighten shadows and sharpen distant landscapes. In addition to its other other purposes, a flash may help reduce red-eye, while a filter can block glare from your DSLR or compact system lens.

Lenses. DSLR and compact system cameras (a sort of hybrid of simple point-and-shoot with larger lenses) offer a unique benefit that the basic point-and-shoot models don't: You can use a different lens for every scenario. If you're in the market for either type of camera, make sure to set aside a sizeable chunk of your budget for additional lenses; lenses can cost nearly as much as (and sometimes more than) the camera itself.

Picture Perfect

Summer might be winding down, but armed with a new digital camera and a little know-how, you'll be able to make every holiday, get-together, vacation, or "just because" memory look better than ever. ●

Avoid A Digicam Disaster

When purchasing a consumer electronic device, you've probably encountered a scenario where the clerk offers you an extended warranty. Before indulging your knee-jerk impulse to turn it down, take a moment to consider protecting your purchase.

As one of the few devices you carry with you almost everywhere you go, your new digital camera will undoubtedly get bumped, doused, dropped, scratched, lost, stolen, and more. All it takes to ruin a digital camera is a single scratch on the lens, a few drops of water to make it through the housing, a shattered view screen, or a careless toss. Rather than face the expense of a full replacement, look into an extended warranty, which can significantly reduce the replacement cost should any of the above occur.

Staples currently offers 1-, 2-, and 3-year extended warranties for a range of devices, including digital cameras. Staples' warranties cover accidental damage, power surge damage, battery failure, and hardware failure of both the mechanical and electrical variety. Some of the covered damages are actually specifically excluded in many manufacturers' warranties.

Printers & Printing

Get More From Your Laser Or Inkjet

We tend not to think much about our printers until they're out of ink, malfunctioning, or in need of a serious upgrade. But just because they work tirelessly in the background doesn't mean they should be relegated to the status of an afterthought. In fact, a little extra effort put into the research and shopping phases will ensure that your new printer can do more than just reproduce your digital documents, images, and Web pages in all their two-dimensional glory.

Printers come in several varieties, but the two primary types you'll encounter when shopping are inkjets and lasers. Each has its own strengths and weaknesses, and many of today's models blur the line between the two and minimize the drawbacks of choosing one over the other.

Inkjet Vs. Laser Printers

For the most part, inkjet printers are remarkably affordable and easy to use and maintain. A fully-featured inkjet printer can be had for a few hundred bucks (or even less), but some specialized models can cost several thousand. Ink for these units can be pricey, which drives up the cost-per-page compared to lasers. They specialize in producing vibrant photo-quality images, and sharp high-quality text for documents. Today's inkjet printers can handle workloads as light as a few pages a day to high-production workloads that can chew through several reams a day. Monthly duty cycles of inkjets tend to range between 1,000 and 20,000 pages or more. Inkjet printers are also available as specialized wide-format photo printers for professional photographers and convenient All-In-Ones, which combine printing, copying, and scanning (and occasionally faxing) into a single device.



The Canon imageCLASS MF5950dw is an affordable laser all-in-one that lets you print, copy, scan, and fax.

Inkjets can be small enough to pack into your laptop bag, large enough to dominate a desk, and everything in between.

Laser printers excel at printing medium-to-high volumes very quickly and at an attractive cost-per-page. Instead of using liquid ink, like most inkjets, laser printers use solid toner, which is composed of black or colored powder heated to adhere to the page. Lasers are a good choice, whether you're looking for a printer to satisfy the high print demands of a small group or one capable of

supporting an entire office full of workers.

There is a lot of diversity within this category, however: lasers can be monochrome-only printers, color and monochrome units, MFPs (multifunction printers), and more. Upfront cost can be higher for a laser printer, but due to their business focus, laser printers tend to be favored for their speed, reliability, and long life. Some laser printers can cost up to five figures, but these heavy-duty units are built to last and often come with on-site repair warranties. Lasers



With separate color cartridges, you can make sure you waste less by simply replacing only the empty ones.



You might be able to save money by refilling your ink cartridges yourself, but make sure you don't void your warranty by trying.

also tend to have large paper trays and can support monthly print volumes of between 5,000 and 300,000 pages or more.

Ink & Toner Yields

The biggest mistake consumers can make when shopping for a new printer is to make a purchase based solely on the price of the unit. Over course of their lifetimes, the recurring costs (ink, paper, and maintenance) for both lasers and inkjets can far outpace the cost of the units themselves. The cost of ink is the major factor you have control over from the outset, so make sure you factor it in when shopping.

To help you make your choice, manufacturers of both inkjets and lasers will often list the average number of printed pages the ink or toner cartridges will produce. This average, or yield, plays the

biggest role your overall cost-per-page. When shopping, look for models that list ink yields among the specs. Ink yields that conform to ISO (International Organization for Standardization) rules can be compared, but those that do not may report a number of pages based on a percentage of the page covered with ink. It's easy to compare ISO yields across printers, but if one manufacturer doesn't adhere, then you can't make accurate comparisons between it and those that do.

While ink yield figures can help you compare different printers, don't expect them to reflect actual output. Your results will vary depending on the type of printing you do. For instance, if you go through a lot of high density text prints, your black cartridge may not live up to the expected yields. Similarly, photo printers that print

a lot of monochrome cityscapes may outlast the expected yields, but printing bright colorful images will drain the color ink cartridges more quickly.

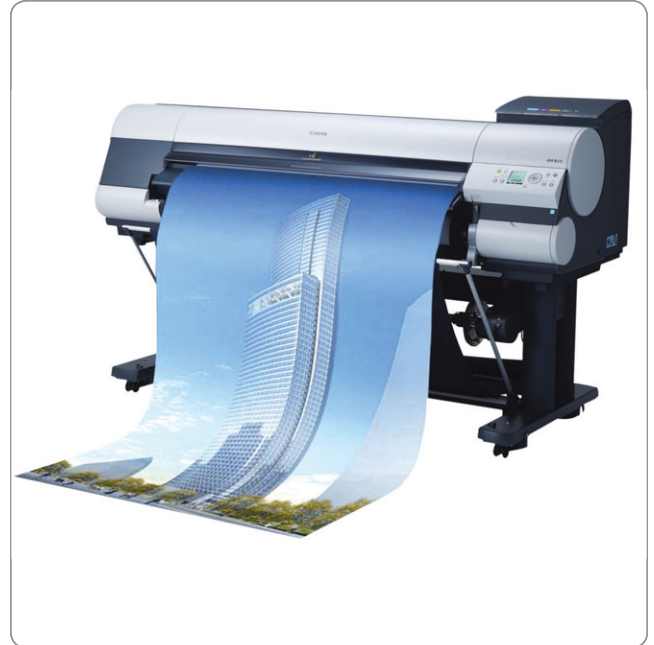
Another thing to look for in a new printer is support for a draft or economy mode, which uses significantly less ink and results in reasonably legible text and somewhat pale images, which may not be good enough to offer customers or clients, but which may be more than sufficient for memos, emails, fliers, and other minor jobs around the home or office.

Printers that support the use of high-capacity ink or toner cartridges can also save you money in the long run.

Considering that ink cartridges can cost upward of \$40 or more and toner cartridges can go for \$100 or more, prolonging the life of those cartridges is a great way



This replacement toner cartridge is designed to work with Epson laser printers.



This Canon iPF815 Wide Format Printer is great for printing technical documents such as architectural plans for site managers.

to get more for your money. There are a handful of things you can do to cut the cost of printing. Printing most of your jobs in monochrome will extend the life of the more expensive color cartridges. Instead of printing an entire webpage, copy the text and paste it into a text document to eliminate the ink that would be spent printing banners and advertisements.

Another cost-cutting strategy is to print on the front and back (duplex) of each page, which can significantly reduce paper waste.

As mentioned, if your printer supports a draft or economy mode, use it for the less important print jobs. If your printer model doesn't support this mode, consult your manual or explore the printer preferences for options that let you eliminate images from the printed documents or reduce the resolution of images and text.

But don't forget to manually raise the resolution for the important print jobs.

Another way to slash the cost of expensive ink is to buy cartridges in bulk; unused ink cartridges tend to have a long shelf life. Third-party inks, refilled, and remanufactured ink cartridges can also save you money, but make sure that using them doesn't void your printer's warranty. Also pay close attention to the quality of the prints these inks produce. If image quality is particularly important to you, the extra cost for name-brand ink might be worth it.

Photo Printing

As mentioned, most photo printers are inkjets, but lasers can produce some excellent results as well. If you're a professional or a business that produces prints for other organizations, look for

a wide-format printer that can handle poster-size prints up to 36 inches wide or more. Photographers should avoid photo printers that use one cartridge for colors. You'll save money in the long run if you need only replace the specific color that is running low.

Many color photo printers also support more than the standard three-color ink system (cyan, magenta, yellow). Some support multiple monochrome cartridges, and additional shades of the three primary colors for extra image resolution and color definition.

Shutterbugs should also look for a printer capable of using various types and finishes of photo paper and paper trays that adjust to multiple common photo paper sizes.

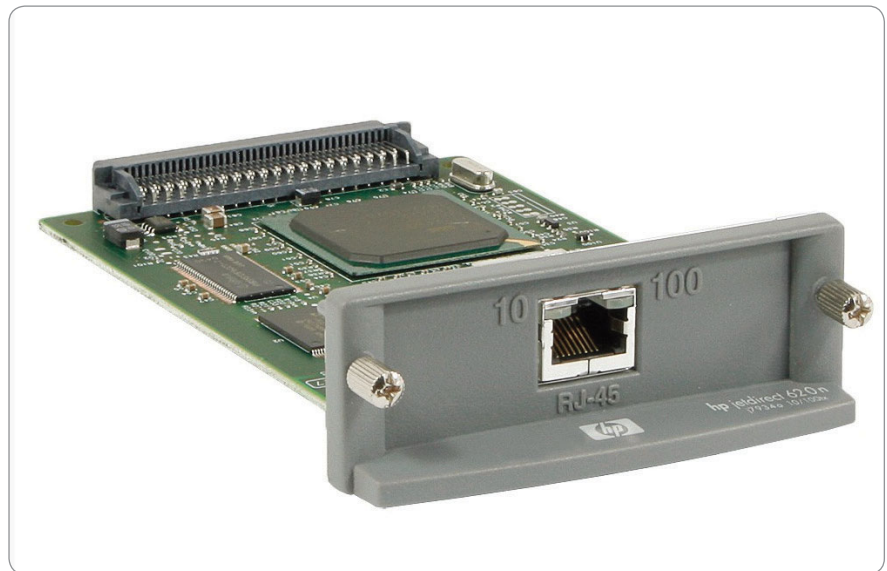
Mobile Device Printing

If you've ever gotten a headache trying to figure out how to

print from your smartphone or tablet, you're not alone. Android, iOS, and Windows Phone platforms all support apps that let you print from your mobile device. These apps often require you to install a PC client that runs on the computer that's connected to the printer. (This PC connection is often a source of confusion, but all it really means is that your mobile device is using your desktop computer as a middleman to enable printing.)

Lately, though, printer makers have made great strides toward making mobile device printing easier than ever. Apple's AirPrint technology lets you print directly from your iPhone, iPod, or iPad device using any printer that supports AirPrint, and more than a dozen printer manufacturers now offer AirPrint-capable printers.

There are other options, too. Many Epson printers come with



A print server such as this one from HP lets the printer manage multiple print requests from multiple different computers.

Epson Connect technology, which lets you use your mobile device to send prints to your printer no matter where you happen to be.

Canon's EasyPhoto-Print app offers wireless printing and scanning services from iOS- and Android-based devices to supported printers. Select HP printers also support wireless printing from devices, even when no router or network is present.

If printing from a mobile device is a priority, check the printer's specs; most manufacturers offer mobile device printing on a number of their latest models.

Networking

Almost all printers support some form of networking, either via wired Ethernet or wireless Wi-Fi. A handful of models require a USB-only connection, but these are becoming less common. The useful thing about Ethernet-capable printers is that you can connect them to a router to automatically give every computer on the network access to the printer's functions. Wireless printers too can tap into the network, but don't need to be located near the router or an Ethernet outlet. This is

Your Printouts Just Got Served

A dedicated workstation or device that receives print jobs from networked computers and transmits those commands to one or more printers is commonly called a **print server**. These are common in small, medium, and large businesses, where numerous print requests need to be handled automatically, quickly, and in an orderly fashion. A print server is a good tool to have handy whenever there is the potential for print jobs to arrive more quickly than the printer is capable of printing them and whenever multiple people are sharing a printer.

One type of print server connects to the network through your router. Another type is a standalone module that you plug into a printer to interface with client computers over a network. In these instances, the onboard print server accepts and queues print jobs locally. Some routers also have built-in print server capabilities, as well.

Most print servers are also capable of some fairly sophisticated print queue management functions. They can let administrators view, reorder, prioritize, or delete waiting print jobs. A print server can also be used to keep track of printer output, which will help you keep up with scheduled maintenance; it also may help you when you're seeking new printers that are capable of handling your monthly duty-cycle.

Because they're such single-function devices, setting up and configuring a print server is typically a straightforward endeavor, and maintenance is minimal.



A touchscreen such as this one can make using the device, and its advanced features, easier than ever.



The Xerox WorkCenter 6605-DN is a laser printer that's more than capable of handling your high-volume output needs.

particularly useful in offices and home offices, as the space near the router is always at a premium.

Maintenance

One of the best ways to get your money's worth from your printer is to make sure it keeps running at its peak. You can save yourself a lot of headaches by making the printer's warranty a major purchas-

ing criteria. For more expensive models, such as wide-format and laser printers, look into the cost of repairs and call a local printer service establishment in your area certified to work on the printer you're looking at to determine the base cost of a typical call, should you need to make one. You might even be able to save some money by signing a service contract.

Professor Printer

Having a printer readily accessible in the dorm room, frat or sorority house, or home can make a big difference for any student. Let's face it, being able to print out term papers, lecture notes, syllabi, and reading lists at a moment's notice can sometimes mean the difference between making the grade and falling behind.

A printer with wireless capabilities is particularly desirable for students, as it can be installed wherever there's room, rather than within reach of an Ethernet cable.

Today's students will undoubtedly find themselves making study aids out of a range of devices, which is why it's important that only printers with the ability to print from mobile devices should make it to your student-centered short list.

Extras

Many printer manufacturers offer accessories that can enhance printers. These can include wireless modules that add Wi-Fi and larger or additional paper trays, so your printer can operate unattended for longer intervals.

Many modern printers also offer other hi-tech extras. For instance, a full-color touchscreen interface can simplify even advanced functions. If you sometimes fax, select a printer that supports that feature. (If you don't have a landline, some printers let you send and receive faxes using third-party web-based faxing services.)

As Good As The Original

Choosing the perfect printer starts with cataloging what you want from the unit and balancing that list against your budget for the recurring costs, maintenance, and the unit itself. Hopefully, we've given you a some helpful pointers on how best to do that. Now you just need to stock up on paper. ●

Cooler Gadgets

The Summer May Be Done But You Can Still Have Fun

Any successful consumer electronics gadget is more than just a list of specs, multiple wireless technologies, and rechargeable batteries. The thing that separates the ones that achieve mass appeal from the ones that fade quickly into obscurity is the joy factor. Is it fun to use? Does operating it feel cool, futuristic, and new? And does the device invoke these feelings for the young, the old, and everyone in between? In our opinion, all of these gadgets answer those questions with a resounding, "Yes."

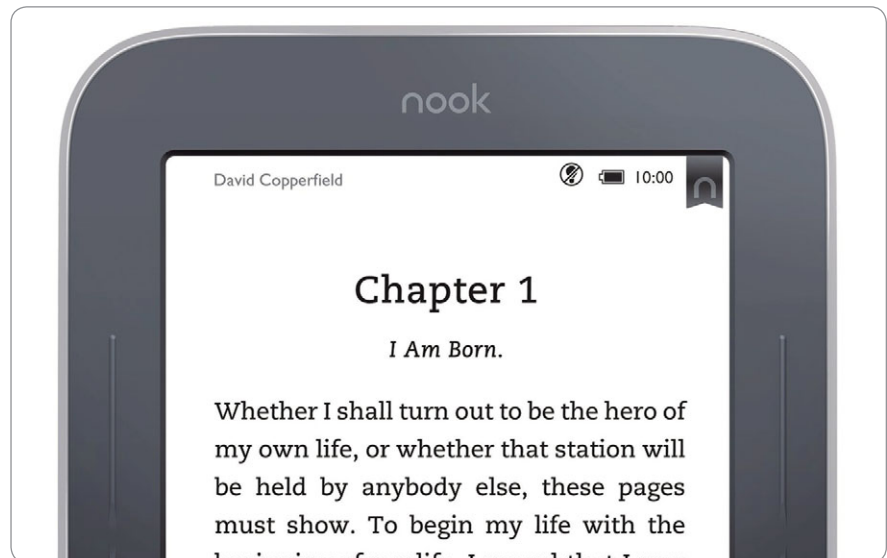
Any gadget you can pick up and know instantly that it could make your life easier, more interesting, or more enjoyable is a clear winner. Here we pick several device categories that may do that for you. We'll also include examples of each type of device and clue you in on some of their best features.

E-Readers

It's easy to list the things you love about reading physical books: the weight of them, the smell of a new book, the simple joy of turning pages, and watching your bookmark crawl toward the end. With e-readers, however, much of what makes them great is what makes them so different from physical books.

E-readers tend to be fairly lightweight and extremely portable. Whether you read to learn new things, escape reality, explore history, or just pass the time, having access to your favorite reading material wherever you go is something an e-reader can bring to your life. Sure, you can carry a book wherever you go, but with an e-reader, your *whole bookshelf* comes with you. That book you've been meaning to read is much more likely to get read when it's just a few button presses away.

Unlike most gadgets you encounter, e-Ink-based e-readers have such impressive battery life that you'll often



The NOOK Simple Touch With GlowLight uses an e-Ink screen, which is easily readable in direct sunlight; the built-in light lets you read in pitch dark, as well.

forget that you're using something that needs an occasional recharge.

E-readers also enhance your reading experience by letting you look up unfamiliar terms right from the text. Some e-readers give you more than just definitions, even going so far as to include links to articles that let you fully immerse yourself in the settings and time periods of the book.

E-readers also let your reading habits merge with your social tendencies, letting you share the books you're reading, post and read reviews, and

get recommendations from readers with similar tastes.

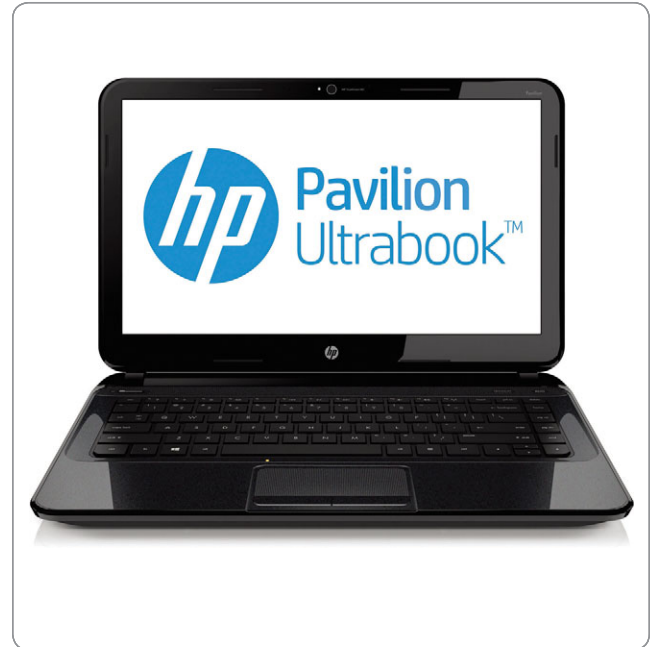
Tablets

It's true, the tablet is taking a rather sizeable bite out of the PC industry. That's because many of the Web-based activities for which we use PCs can be accomplished just as well (or sometimes even better) on a device that's thin, shiny, and portable.

Email has become a monster of a communication medium, letting us accomplish what physical mail and



With the Nexus 10's bright, high-resolution screen, your photos, videos, and apps look better than ever.



The HP D7H13UA Ultrabook™ is slim, light, and powerful, and it also offers impressive battery life.

telephone calls used to require, in a fraction of the time.

Touchscreen-based interfaces are available on smartphones and PCs as well, but they seem most at home on tablets. Just as using a mouse and keyboard feels like second nature, we've quickly grown accustomed to pinching to zoom, swiping to scroll, and flicking to access new screens and more on tablets. And let's face it, touchscreens are just fun to use.

Even though we may not necessarily consider ourselves gamers, there are so many (and so many types of) downloadable distractions on tablets that we can't help indulging our inner kid every now and then.

Movies and TV shows aren't just for TVs any more: With a tablet all your favorite flicks and shows go with you.

For music lovers, a tablet is an excellent device. Aside from putting all your favorites on the device, or tapping into them from a third-party music streaming service, there are numer-

ous apps that let you explore what it is you love about the music you listen to. This has the effect of opening you up to new artists you may not have been introduced to otherwise.

And apps. There are hundreds of thousands of them that let you improve how you work, give you new ways to play, and offer countless more experiences. It's possible to find dozens of apps that you love and use regularly without paying a dime, but many more advanced apps provide tons of must-have features for a pittance.

Laptops

Having a fully-capable computer on hand when on the road isn't just useful—in many cases it's vital in order to get business done, communicate, and run the software you need. But today's laptops are more than just a computer in a clamshell.

Ultrabook™ systems, for instance, are designed to be everything you want from a computer, only faster,

thinner, and more portable. Multicore processors and fast memory let you multitask at your own pace. Built-in SSDs (Solid State Drive) deliver impressive performance and fast boot times. And multiple wireless technologies ensure that you and your peripherals always have a connection. Best of all, an Ultrabook™ offers enough battery life to let you work untethered all day long.

Convertibles are a type of laptop that features a touchscreen and the ability to either flip the screen around and fold it against the keyboard or remove the screen entirely. This way, you can use the laptop as a tablet, yet still access all the PC-based software you know and love. When you want access to the keyboard again, for instance to type up a long email or create a presentation, just revert to laptop mode.

Desktop replacements are laptops that tend to run powerful CPUs, capable graphics processors that can han-



With the ThinkPad Series 3 Mini Dock, you can dock your ThinkPad to a monitor, keyboard, and mouse and use it as you would a desktop machine.



The HTC One Glacial Silver is a slick smartphone that keeps you connected to the 'Net wherever you happen to be.

dle 3D-intensive applications, plenty of physical storage, for programs and media files, and oodles of fast memory; all in order to deliver as close to a desktop-class computing experience as possible. Battery life on DTRs is typically only a few hours, but what you sacrifice in mobility, you more than make up for in performance.

Anyone who uses a laptop as a primary computer should also consider getting a laptop dock. These units let you easily attach the laptop to an external monitor, mouse, and keyboard, among other peripherals, yet detach quickly when you need to take the show on the road. Some docks also include media readers, additional USB ports, and multiple display ports.

Smartphones

It used to be that smartphones did a lot of things that other gadgets did, only very poorly. Now, however, they've gotten to the point that your

smartphone can do digital photos as well as your point-and-shoot, make sure you get to where you're going as competently as your personal navigation device, and store and play music as ably as your old MP3 player. If we had to choose the most disruptive technology of the past decade, smartphones would be it.

As with tablets, the impact of apps cannot be overstated. Whether you choose an iOS, Android, Windows Phone, or BlackBerry smartphone, you'll be able to tap into thousands (and in some cases, hundreds of thousands) of apps, many of which add functionality and make you wonder how you ever lived without them.

Being able to access the Internet from your phone is becoming as expected as their ability to handle voice calls. But smartphones are continually getting better at helping you quickly separate what you need from all the rest of the junk. Voice-assisted search,

navigation, and local business searches are making the Internet even more accessible than ever.

Many smartphones offer built-in cameras that let you quickly take panorama shots, record HD video, or apply post-processing effects similar to those the pros use—all in a device that slips easily into a shirt pocket.

Social networking with your smartphone is more than just sifting through mindless tweets and status updates. With the right apps, your smartphone can alert you when friends are nearby, let your loved ones know where you are at all times, and find and participate in fan communities no matter where you are geographically. With a smartphone, even the most introverted soul can find kindred spirits.

Accessories

Many of the best gadgets you can get need a little help to reach their full potential.



Verso's eReader Clip Light works great for those of eInk-based e-readers that don't have a built-in light.



Sennheiser MX680 Adidas Portable Sports Headphones let you enjoy music and video while you work out.

Your smartphone may have a scratch-resistant screen, but it's probably not going to survive a failed attempt to capture first-person video of your bike ride down the side of a mountain. That's where a smartphone case can come in handy; some even

keep your device dry while they protect it from impact.

A quality pair of headphones can help you enjoy video and music playback on smartphones and laptops.

You may want your laptop to be as portable as possible, but that can

mean skimping on internal storage. Get an external hard drive or flash drive to go with that laptop.

Most e-Ink e-readers look great in direct sunlight, but are as (un)readable as real books when the lights go out. It's a good idea to also pick up a book light optimized for your device.

A stylus gives you more precise control of your tablet, while a pair of capacitive gloves lets you use your touchscreen-based device in cold weather.

Tablet users who want a big-screen experience will want to look into getting HDMI cables adapted to connect to their tablets' mini HDMI ports.

Auxiliary charging cables and additional batteries are must-haves for those frequently-used devices.

Unexpected Bliss

One of the best parts of working a new device into your life is discovering something you didn't expect, or finding out that a feature you didn't care much about is suddenly extremely useful to you. When a gadget has that kind of impact, you can't help but get excited about it. ●

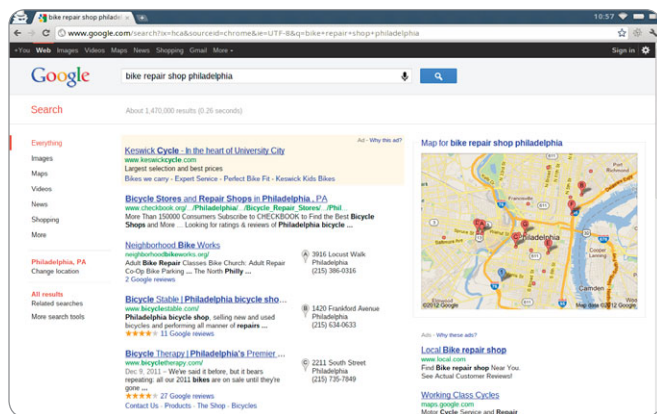
Tools For School

The phrase "use the right tool for the job" has applications outside of shop class. When it comes to devices such as laptops, tablets, e-readers, and smartphones, they're all the right tool for students.

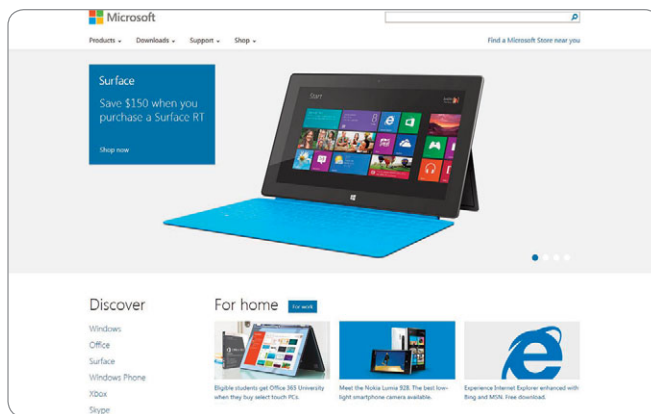
- Tablets are great for students who traipse across campus all day, but need a way to stay connected the whole time.
- Smartphones make it easy for students to quickly access documents, data, and more without taking up much space.
- E-readers are perfect for keeping a student's reading list handy no matter where he or she is.
- Laptops can do more than just act as supplemental learning devices; they can easily handle everything a student needs from a computer, with the added benefit of being portable.

Establish An Online Presence

How To Be Sure You'll Be Seen On the Web



Google Places can help local customers find you.



A website's landing page should clearly demonstrate what you offer.

Your website and overall online presence are the new form of "yellow pages," as the Internet is where most people go these days to search for services and products. This means that it's critical for your small business to develop a strategy to improve your visibility and credibility via the Web. Here, we'll examine the different ways to establish your online presence.

Local Search

Most search engines allow you to lay claim to and manage local business listings, so you'll show up when a customer searches for a specific service in a given area. For example, Google has Google Places, while Bing offers Bing Places For Business. You'll want to register your business with all the popular search tools to attract new customers who are actively searching for the types of services you provide. If your small business isn't listed in a location-based Web search, customers may never even get to your web-

site. Listing your business with Google Places and Bing Places For Business is free and you'll be able to provide contact information, hours, and links to your website.

Even better, listing with Google and Bing means that you'll show up on mobile services such as Google Maps, Google+, Bing Maps, and other location-based Web apps.

Speaking of Web apps, be sure to register your business with online rating and review services that match up with what you offer. For example, Yelp (www.yelp.com) is one of the most popular rating websites, offering review categories for almost everything, including restaurants, automotive sales and repair, medical, and home services. Other popular rating websites include Angie's List (www.angieslist.com) and TripAdvisor (www.tripadvisor.com).

The Website

Your website is your chance to convince customers that you're the best

choice for the job. If you don't have a website, you need one, as today's consumers expect to be able to research and contact you via the Internet. There are several key design aspects you'll need to focus on when trying to grab a customer's attention. First, examine your website's title. Does it clearly state what services you offer? Secondly, does it make a favorable impression on the reader? When creating the headline, consider what you want them to do now that they're on your website. For example, you can come up with a headline that entices them to learn more about your products.

Next, take a look at the landing page and analyze whether the visuals effectively demonstrate what you offer and evoke a compelling response. Scrolling banners or an image carousel that displays your services or products will visually inform visitors of what they can expect, as well as showing off your quality of work. Whatever your business, be sure that the graphics you use show potential clients what you



There are a variety of ways to you to attract fans to your Facebook page.



YouTube integration on Google+ allows users to watch videos on your Google+ company page.

can do for them and makes the value clear.

Many website-building services provide hundreds of templates from which you can select, depending on the look and feel you'd like to convey. Examine the choices offered by your provider and see if there are different options that may better tell your company's story. Once you've selected the template you feel is best, take some time to tailor the text, graphics, and/or video to draw people into viewing the rest of your site. Finally, be sure that you make it easy for customers to find your address and contact info.

Social Networking

Small businesses should take advantage of social networking to interact with and inform customers of news. There are a variety of venues to consider, including a blog, a Facebook page, a Twitter account, a Google+ network, a Pinterest pinboard, a YouTube video channel, and a Foursquare account. Some of these social networking tools may be more

appropriate than others, depending on your business, of course. For example, product designers and manufacturers may find that a blog, a Pinterest pinboard, or YouTube videos are better for creating "how-to" instructions than Facebook or Twitter. Conversely, those interested in blasting out and informing people about special deals may find that Facebook, Twitter, Google+, and Foursquare are more effective.

Social networks give you an easy way to interact with customers, and through these services, you have a recurring opportunity to give them a reason to patronize your business. A variety of marketing techniques are viable here, including special promotions and links to positive reviews. Consider showing some interesting or unforeseen uses of your services.

Of course, not everything you post should necessarily be a sales pitch; too many of those may turn off prospective customers. Asking fans for their opinions or having them vote on a poll provides you with some meaningful interaction, as well as an oppor-

tunity for new ideas. Alternatively, you can give your fans a reason to check in with your business by providing advice about topics in which your business specializes. For example, an accounting firm could cover common mistakes people make or miss out on when filling out their taxes.

Optimize Your Online Presence

The rise of mobile devices and the availability of faster, more reliable Internet access, allow people to search for nearby businesses from just about anywhere. When your business is visible in local searches, you'll attract more people to your website. And once they've found your website, you can inform them of all the services and products you offer. You can also reach out to them with interesting, constantly-refreshed content that you add (daily or weekly, if possible) to your blog and social network accounts. The combination of these online tools can help customers find and maintain a relationship with your small business. ●

Business Tech

Consider BYOD Risks

Are You Willing To Allow Employee Devices In The Office?



Tablets may provide employees with new ways to stay productive on the road, but those owned by employees may add to your security risk.

using to access your network? For example, have they installed security software, as you would normally with any technology provided by the company? A recent Trend Micro study found that smartphone and tablet platforms will suffer more cybercriminals attacks in the future, and security vulnerabilities can be found even in legitimate mobile apps.

If they do have security software installed, does it automatically update? Does it have the security features, such as anti-phishing tools, normally provided in the security apps you use? If the employee doesn't know to (or won't) install extra software, the device could be a potential risk for leaking data and secrets to hackers, because it's more open to viruses and spyware. One possible (but possibly expensive) solution is to agree to pay for and install on employees' devices security software that will meet your business requirements.

Another problem relates to how the devices will access your server. If the device is lost or stolen and it's set up to automatically enter a username and password, a thief can use it to discover company secrets or access the network. Therefore, most experts recommend that you require two-factor authentication, such as a username and password—plus a randomly generated code (generally sent as a text to their mobile phone or via email), PIN, or fingerprint verification. The new holes in the device's security could mean more trouble than convenience, if the worst happens.

What Can They Access

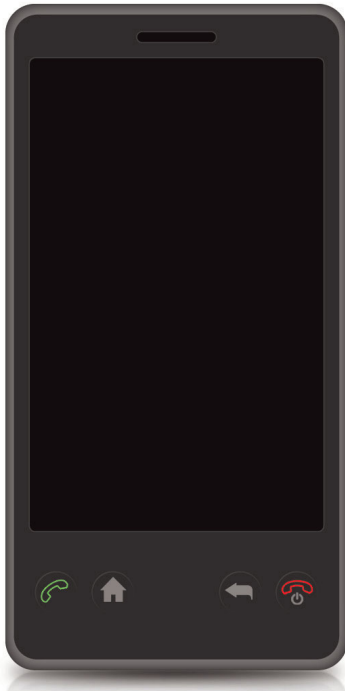
You want employees to be able to use their technology effectively

Many organizations now take advantage of BYOD (Bring Your Own Device), as employees are looking to utilize for work the technology they already own at home. A recent study from SailPoint found that 95% of enterprises have employees that use their mobile devices for corporate applications. Small businesses don't typically have the luxury of an IT staff to tailor network and server security to all of the individual devices workers want to

bring in, so you'll need to consider the risks before allowing such devices to access your small business data. We'll detail some of those risks here.

New Security Holes

Sure, it's great that employees want to maximize their productivity, and with BYOD, that extra productivity can come from using a notebook, Ultrabook™, tablet, or smartphone with which they're familiar. But how secure are the devices they plan on



Smartphones are one of the most popular devices employees tend to bring in for both work and personal use.

Smartphone Policies template

The use of a smartphone in connection with YourOrg's business is a privilege granted to employees through approval of their management. YourOrg reserves the right to revoke these privileges in the event that users do not abide by the policies and procedures set out below.

The following policies are aimed to protect the integrity of YourOrg data and ensure it remains safe and secure under YourOrg control. Please note that there may be limited exceptions to these policies owing to device limitations between vendors.

References to the word "device" below includes, but is not limited to, Android, BlackBerry, iPhone, iPad, tablet, Windows mobile or other smartphones.

Users of Personal Smartphones must agree to all terms and conditions in this policy to be allowed access to those YourOrg services.

[The policies below are easily adopted because they require only behavioural compliance by users]

- Irrespective of security precautions mentioned here, you are expected to use your device in an ethical manner and in accordance with YourOrg IT Acceptable Use Policy
- Your device must lock itself with a PIN (personal identification number set by you)
- If left idle, your device must automatically activate its PIN after a maximum time-out period of 5 minutes
- In the event of loss or theft of your device, you must inform YourOrg within 3 working days

[The policies below are typical of applications only, and could be re-written to reflect those applications. To enforce these on an actual device/smartphone would require some negotiation of permissions]

- Your device will lock your account after 5 failed login attempts
- Your device or application will lock every 5 minutes, requiring re-entry of your password
- Your device will include password rotation every 90 days up to a maximum of 3 passwords
- The password must be a minimum of 7 characters
- The password must contain at least one letter or number (except on devices that cannot accept

BYOD policies can help employees to understand how they should be using their personal devices for work.

while on the road or at home, but even at the office you may need to limit their access. Even with adequate security software, a criminal in possession of a lost or stolen device can crack your network if given enough time. A recent study from the Ponemon Institute indicates that the biggest threat to a company's business data is the company's own employees, mainly due to stolen and insufficiently secured devices.

With a work-provided device, you'll typically have a utility that allows you to remotely wipe it, so you know that thieves won't be able to use any of the network information stored in the device to reach your corporate data. Blocking off confidential data is also a good idea to prevent employees from copying it to their personal devices—making it even easier to find if the device is stolen. The Trend Micro Threat Research Team also found that hackers are using highly targeted attacks,

known as *campaigns*, to reach your network via a series of attempts and methods. With each successful attempt, they gain another piece of information that will help them to get into your network. Thus, you'll need to ensure that any company data available on an employee's mobile device is secured in some way.

Personal Vs. Work

BYOD also presents a challenge for businesses that need a way to keep personal and work data (and apps) separate—a concern for business that must follow stringent compliance rules, such as HIPAA or PCI/DSS. This can be accomplished with specially-designed applications called MDM (Mobile Device Management) tools, that provide an extra level of security for work-sanctioned devices. However, the expense of MDM utilities can be prohibitive for small businesses. If

this is the case, you may need to rely on employee education. For example, you should tell employees that they shouldn't trust an email with links or attachments they don't recognize—and sometimes those they do recognize—even in their personal email.

This way, the non-work apps on your device will be less likely to introduce security issues for the business. Other key education points include things such as connecting to public Wi-Fi networks and writing passwords on notepads or sticky notes that are carried with you or stored on your desk. An "accepted use" policy will help workers to know what's expected of them as far as BYOD. (For example, can the employee use online file storage services with work data?) Proactively outline and anticipate the challenges workers may face, and include repercussions for not adhering to the provided policies. ●

Windows XP Deadline Approaches

Are You Prepared, Or Are You At Risk?

April of 2014 looms, even if you're unaware of the significance of that date. On April 8th of next year, Microsoft will cease supporting Windows XP, the aging-but-still-popular OS (operating system) the company introduced way back in 2001. (At the same time, the company will end support for Microsoft Office 2003.)

Safety Is The Issue

Does that mean that you must stop using WinXP as of that date? That the OS will suddenly stop working, leaving you stranded? Absolutely not. Windows XP will continue to work as well as ever—and in fact it works quite well. The OS will continue to allow you to operate, your applications will continue to run; the difference is that it may not allow you to operate *safely*. And safety, especially when you're operating a business, is paramount.

No More Updates

After the April 8 deadline, Microsoft will supply neither technical

support nor regular security updates for Windows XP. Functionality improvements and malware patches will simply be unavailable. And that could leave you in a very vulnerable spot. In effect, by continuing to use an unsupported operating system, you're playing a digital version of Russian roulette.

Experts' Advice

What do the experts advise? If your mission-critical business processes rely on Windows-based soft-

ware, it's time to make the move to Windows 7 or Windows 8. Do it now, before you're *forced* to do it, and while you have a chance to experiment with different options and approaches and while you can take the time to test your applications.

If you have work-related software that absolutely requires Windows XP, you'll need to find a way to run those applications in a safe "sandbox" that isolates WinXP so that if it gets infected, the infection cannot spread. (But don't forget that the apps themselves—the legacy software that requires WinXP—may also be at risk. So even if you were comfortable running an unsupported instance of WinXP, your applications might themselves be vulnerable to being exploited, thus constituting a danger to your business.)

If you fail to update your operating system (or to find safe ways to operate WinXP), you put your business at risk; it's as simple—and as serious—as that. ●



What Does Microsoft Say?

Microsoft's website is unequivocal about the need to upgrade:

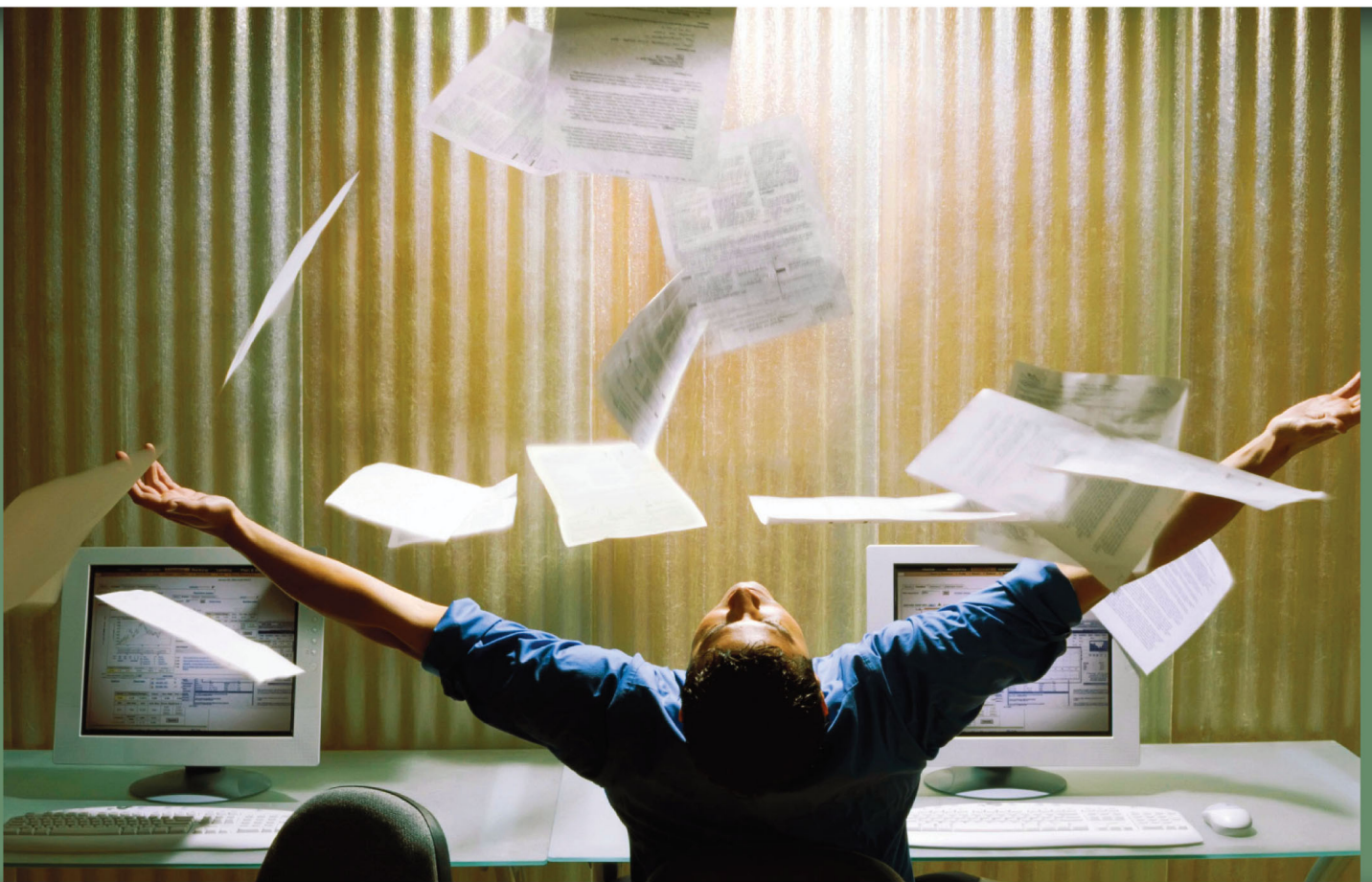
"Windows XP SP3 and Office 2003 will go out of support on April 8, 2014. If your organization has not started the migration to a modern desktop, you are late. Based on historical customer deployment data, the average enterprise deployment can take 18 to 32 months from business case through full deployment."

Canon

PIXMA
Quality. Promised.

Did you know?

You can print, scan and even copy 2-sided documents, automatically? With a built-in duplex ADF, and Auto Duplex Printing, working with 2-sided documents is easy!



- **Scan 2-sided documents automatically with the ADF on the top of the printer.**
- **Print duplex documents automatically, no flipping the paper manually.**
- **Even copy 2-sided to 2-sided!**



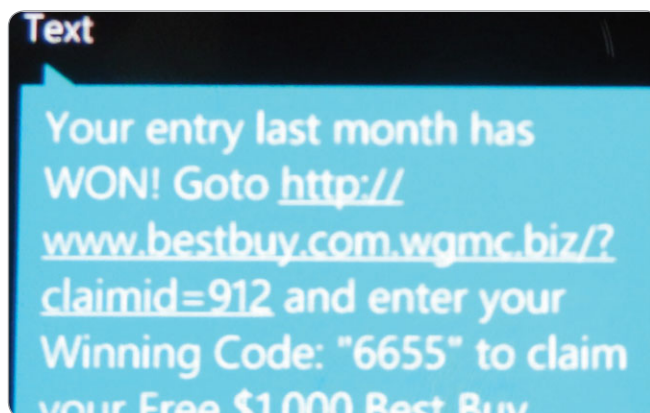
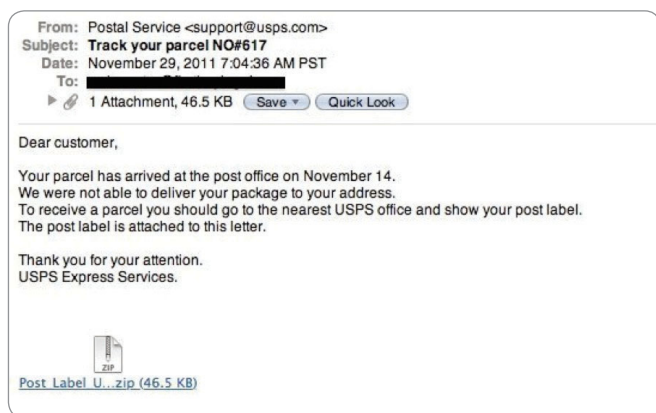
PIXMA MX922



Smart Computing is produced by Sandhills Publishing. Founded in 1978, Sandhills Publishing is an information processing company with a diverse range of products covering a variety of industries. Sandhills Publishing is located in Lincoln, the capital of Nebraska, and benefits from the quality of life and strong work ethic traditionally associated with the Midwest.

Avoid Online Scams

How To Keep Your Home & Small Business Safe



Teach your employees how to look for questionable emails and to avoid clicking links within the email.

Fraudsters may also try to scam you via text messages.

The Internet is full of scammers and fraudsters, and it's an unfortunate fact of online life that you'll have to deal with emails, pop-ups, text messages, and other communications from people who are trying to scam you out of personal information, credit card numbers, and passwords. On the Web, scammers can lurk anonymously and trick people into providing money or personal data via things like fake contests, phony tech support, and other predatory schemes. Small and home business owners must also take into account whether co-workers could fall into a fraudulent trap, so it's a good idea to have a plan of action for dealing with scammers. We'll examine the most common types of scams and show you how to avoid them.

See Scam, Avoid Scam

Symantec's Andrew Singer, senior director for small business, noted, "Today, small businesses

have more to worry about than malware outbreaks that slow their machines and try to fool them into paying for fake antivirus products. Our recent *Internet Security Threat Report Vol. 18* showed that 31% of all targeted attacks are now directed at those with 250 employees or less—a threefold increase from last year." Singer went on to say, "Cybercriminals are targeting customer data, financial details, and intellectual property. Because small businesses often lack adequate security practices, attackers are increasingly targeting them. And because small businesses partner with and serve large organizations, criminals are not only after the small businesses' intellectual property but also the intellectual property shared with them by other businesses."

To find out how to avoid these types of scams, we talked with Miranda Perry at Scambook, a private consumer-oriented complaint

resolution organization based in Los Angeles. "Managers should advise employees to watch out for the common red flags of a scam," said Perry. She warned readers to watch out for "unsolicited emails or phone calls requesting private personal or financial information (including online account passwords), 'too good to be true' offers, and hidden fees buried in 'terms of service' contracts."

You may also receive "phishing" messages, emails that often tell you to "click here" to win a free item. Perry told us, "The most common giveaways in phishing messages are 'free' gift cards to retail stores such as Walmart, Target, and Best Buy—followed by popular electronics such as iPhones and iPads." Money transfer scams are also popular with cybercriminals. Perry notes, "Employees should not conduct transactions with individuals they do not personally know. Do not



Scam emails will often fake the look of a real email, but they often promise things that are too good to be true. (And your mom was right: If it seems too good to be true, it's not true.)

Identity thieves will often try to get you to enter credit card and social security information.

transfer money to unknown individuals or accept payment in the form of wire transfers or money orders, which can be easily counterfeited."

Identity Safeguards

Protecting your online identity is becoming more and more important with the evolution of social networks and blogs—where many people unknowingly create a public record of things that scammers can use to steal your identity. Symantec's Singer told us, "Identity theft is a two-step process. First, someone steals your personal information. Second, the thief uses that information to impersonate you and commit fraud. It's important to understand this two-step approach, because your defenses *also* must work on both levels. Protect your personal information diligently to avoid becoming a victim. If identity thieves can't access vital data like your Social

Security, tax ID, or bank account numbers, they can't defraud you."

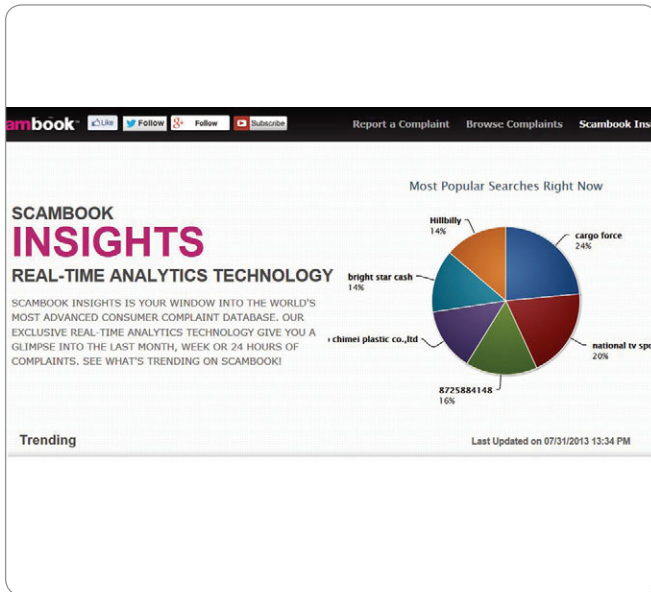
Of course, some identity theft occurs the old-fashioned way: Thieves will rifle through trash, steal mail, and use con games to trick you into revealing sensitive details. It's up to you to protect your personal information.

A few of the things you should never post publicly include your home address, personal phone number, driver's license, and social security number. Be sure to shred all paperwork containing account information or personal identifiers. It's also important to create strong passwords for your online accounts. Check out the "What Is A 'Strong' Password" sidebar in this article for more info on how to come up with secure passwords.

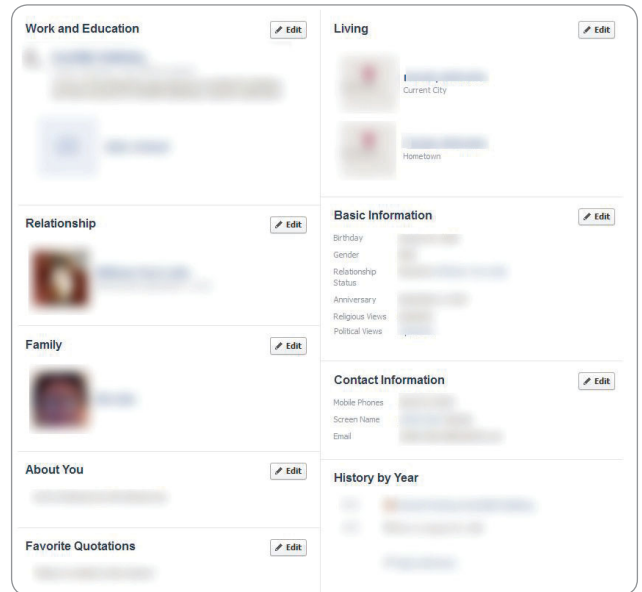
There are a variety of ways that scammers will try to steal your identity. One of the most common techniques is for a cybercriminal

to hack into someone's account and send out an email, message, or social network post with a link to a malicious website. Because the message will appear to have come from a friend, the hacker hopes that you assume the link will be something you want to see. Typically, the malicious website will load your PC with some sort of spyware that the hacker can use to uncover your username and passwords. Then, he or she can break into your accounts and gather even more data.

Other ways fraudsters can steal your identity include free apps on social networks (which require access to your profile info), crooks pretending to be working for a business (where they can ask for credit card information), and looking through a hacked PC for usernames and passwords stored in documents or spreadsheets. To protect yourself from identity theft, IDC Financial Insights' Mi-



Scambook is an online service that aggregates consumer complaints, follows complaint trends, and tracks resolutions.



Facebook requires you to configure privacy settings for all of the different sections under About.

chael Versace told us, “Limit use of credit cards, check statements on a regular basis, never give away SSN or other personal information to parties you don’t know, and change ecommerce passwords on a routine basis.”

Gone Phishing

Scammers don’t always need to hack into your PC to gather your valuable information. Some try to trick you into simply *giving* them the information. For example, fraudsters often send out spoof emails that try to replicate the look and feel of popular websites, such as your online banking or social networking account. The spoof email may ask you to provide your username and password, or other type of personal information, to enter a drawing or giveaway. Another type of phishing is scareware, emails that attempt to convince you that by clicking a link, you’ll avoid some drastic problem, such as your account being deleted, or that clicking the link will fix something wrong, like

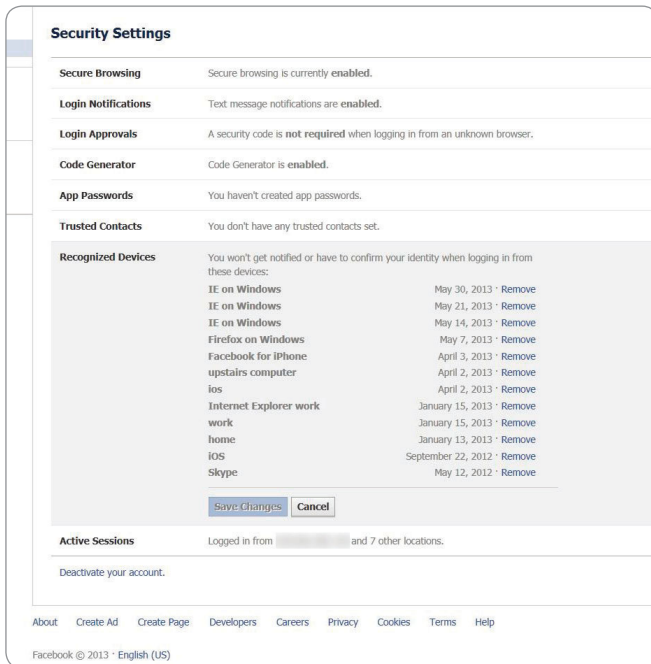
being able to delete viruses that have been “found” on your PC.

Due to the large number of spoof emails that purport to come from UPS, that company recently outlined the signs you should look out for. We found that this advice would be helpful for anyone trying to identify any scareware

email. UPS notes that it does not request—in an unsolicited manner—payments, personal information, financial information, account numbers, IDs, passwords, and copies of invoices. Common indicators of scam scareware, according to UPS, include poor grammar (such as usage mistakes,

What Is A “Strong” Password

Miranda Perry at Scambook tells us, “Secure passwords should be between 8 and 16 characters and include a mixture of uppercase and lowercase letters, numbers, and symbols (where allowed). Never repeat the same password for different accounts,” she says, because identity thieves will try stolen usernames and passwords on other popular websites. If they uncovered your passwords through a keylogger, they can determine the websites you most commonly visit and apply the usernames and passwords at the web destinations you visit often. And typically, they will try variations of the pilfered information, so slight alterations to the username and password aren’t a good idea either. You’ll also want to stay away from any common dictionary words, because hackers often attempt brute force attacks using password cracking software that can try thousands of words in seconds. Because many websites requires a number in the password, the software typically will add single digits behind the words. Thus, “Fido1” isn’t any more secure than “Fido.”



The Security section of Facebook allows you to find out when and where Facebook has detected logins.



It's not always wise to give away your location on social networks, especially if people could figure out that you're on vacation.

misspellings, and excessive use of exclamation points); unexpected requests; and an absence of alternative ways to provide the requested information, such as phone number, mailing address, or a physical location. Be suspicious of any communications asking for this type of information, as even trusted sources could have had their email or social network hacked.

Businesses must also worry about a newer type of phishing attack called *spearphishing*, because the attacks use personal (sometimes detailed) information that target a specific person or organization. Because they're so specifically targeted, these types of scams are harder to detect than the average "win a free iPad by clicking this link" phishing message. For instance, most spearphishing emails will address the recipient by name and include details about their current position (information which could be

gleaned from LinkedIn or another social networking website). Because the email looks like something you'd receive from a real person, you're more likely to click a link or open a malware-filled attachment in the email.

To protect your business against both phishing and spearphishing, start by educating employees. They need to become skeptical about any attachments in emails. Cybercriminals have recently favored the PDF file format, as it's a relatively easy way to disguise .ZIP files that are filled with viruses. If you receive any unsolicited emails with attachments, it's best to avoid opening them until you can verify that the file is legitimate. For example, if you know the contact's phone number, try calling or texting see whether you should open the attachment. If you are suspicious of the links inside the text, hover your mouse pointer over the URL and see if the pop-up matches the Web ad-

dress in the link. If the links are even slightly different, don't click it. In Internet Explorer, the domain name of the Web address may be emphasized with black or bold type, so it's easy to identify its true location.

Social Network Protection

"Cybercriminals know that social networks can give users an implied sense of security," says Singer, "making them more inclined to put themselves at risk by over-sharing contact and location information, clicking on links without thinking, or falling for a cleverly orchestrated scam. Cybercriminals can then gain entry to online accounts and steal personal information and content, including personal communications, documents, login credentials and even bank login information." One of the keys to thwarting these sorts of "socially engineering" attacks is to configure your social network settings such that your profile

cars.com Buy Sell Research Fin

New Search

2005 Ford F150 FX4 - \$6,700

Contact: W RODRIGUEZ (Individual Seller)

Vehicle Description Kelley Blue Book Values Photos Finance & Loan Calculator Specs & Reviews Safety & Reliability

About This F150

Mileage: 121,000 Transmission: Automatic
Body Style: Regular Cab Pickup [CARFAX Record Check](#)
Exterior Color: Silver
Interior Color: Black

Selling Points: I was on a recent road trip, and drove 2,600 miles. Great comfortable drive. I averaged a solid 21 22 mpg on the highway. 17 around town. Really a nice, comfortable drive. Everything works as new! The interior is excellent! Exterior is very clean. The door sills are not nicked up..... Never smoked in. Both keys, books, manuals,.....

★★★★☆ (4.1) 34 consumer reviews | [Write a review](#)

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Sell your car on Cars.com
Find the car you want, sell the car you have.
Reach 10 million shoppers and make thousands over trade-in

Be careful about how you provide payment on websites where you deal with individual sellers.

http://www.craigslist.org/about/terms_of_use

CRAIGSLIST TERMS OF USE

Last Updated: February 14, 2012

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Read the terms of service and be sure to avoid any sellers who violate those terms.

is viewable only by the people you trust.

This isn't always easy. For instance, many experts and Facebook users have noted that privacy settings on Facebook change on a regular basis. One good example of this is the About section, where you can provide information about your education, work, contact information, favorite movies, and other such things. You'll need to manually change the privacy settings for each element listed; otherwise, it could be visible to the public.

To change your settings in Facebook, as of press time, you'll need to click the About section and click the Edit button at the top right of each section. Then, you'll see a drop-down menu with the different groups of people who can see that information, including Public, Friends, and Only Me. Select the option you prefer for each section. Next, click the Friends tab, so you can configure

who can see the photos and posts that friends have uploaded. You'll also want to set up privacy settings on your own photos. Click the Photos tab and select Albums. Cover photos are always public, but you can adjust the privacy for your mobile, timeline, and profile pictures. You'll have manually set the privacy levels for each individual album when you uploaded it, but you may want to double-check which ones you make public.

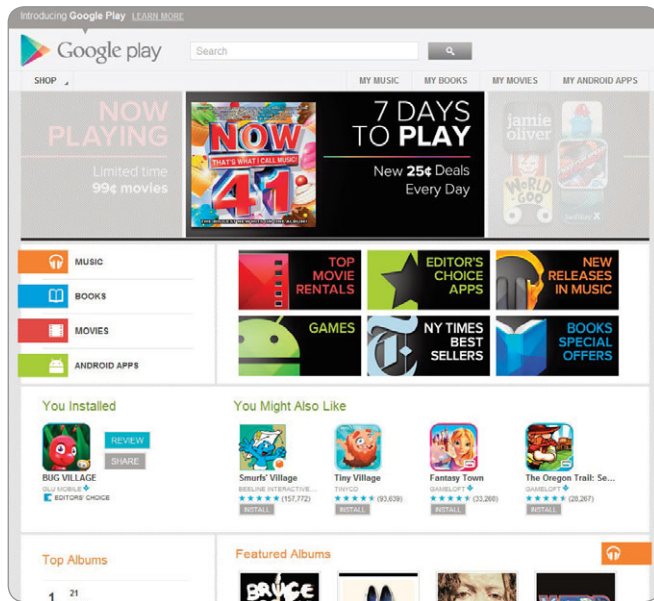
Another good piece of advice relating to social networks is to connect only with people you know and trust. The Identity Theft Center warns, "Don't put too much out there—even those you know could use your information in a way that you didn't intend." For example, a friend whose account was hacked could access the personal information that you've added to your account. Even though *your* Privacy settings may be secure, the hacker is still

able to reach the information by breaking into one of your friends' accounts. The Identity Theft Center also says that you should be smart about what you post. For instance, don't announce when you will be leaving town.

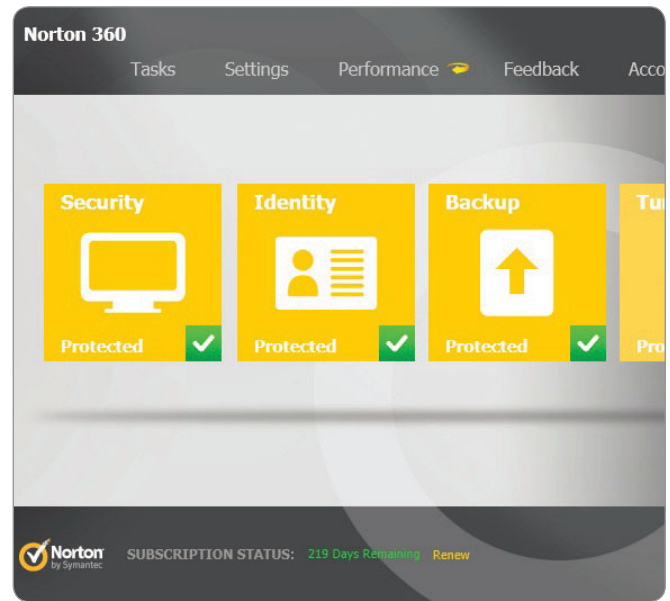
Many social networks give you the ability to see when and where active login sessions occurred. Perry told us, "Users are advised to review all third-party applications, active login sessions, and other recent activity on a regular basis. This will help users identify and stop any fraudulent activity occurring on their account."

Financial Transactions

Although you're probably more wary of scammers when it comes to direct money transfers, there are other ways that scammers can trick you, including merchandise fraud, fake checks, and undisclosed extra fees. And because you may often be dealing with unfamiliar sellers and buyers,



Some scam apps have recently been seen in the Google Play store.



Online fraud protection comes with some of Norton's security programs, including Norton 360.

you might have to do some work to avoid being defrauded. When asked what are the best ways to research questionable sellers or buyers, Perry told us, "First, users can search for the individual's information (including name, phone number, and email address) on Google and Scambook to discover if previous reports have been filed against them. Additionally, ecommerce sites such as eBay and Amazon include a number of community features to protect against scammers. We encourage everyone to review a user's site feedback and personal profile whenever possible."

In cases where you're buying from or selling something to an individual using Craigslist, Etsy, or ArtFire, learn about the different rules and terms of service. "If the seller or buyer appears to violate these rules in any way, this is a significant red flag and the individual should be avoided. Additionally, most marketplace sites will include their own specific guidelines on how to spot and avoid scams," says Perry.

For any website where users may be selling or buying from an individual, such as Craigslist, "We encourage users to familiarize themselves with the site's complete 'terms of service' and 'community rules,' says Perry. If it looks as if a seller or buyer has disregarded any of these terms, it's best to avoid that person.

Security Software: A Worthwhile Investment

To reduce or eliminate scam communications, invest in security software that will protect the PCs in your home or business. "Symantec Online Fraud Protection is a comprehensive managed solution that protects organizations and their customers from losses that can result from online fraud. It helps protect against identity theft, phishing, and other varieties of online fraud to preserve the organization's brand, improve customer loyalty, minimize loss, and avoid liability," says Andrew Singer. "Even better, if an incident should occur, Symantec's managed service will help you

respond with reconnaissance and countermeasures to help protect the business."

Utilizing the cloud for security and IT needs is often ideal for a small business. Cloud services level the playing field, allowing even small companies to outsource IT investment, which helps facilitate better debt and cash flow management, while at the same time mitigating risk. "By offering essential business solutions on a flexible, scalable, pay-as-you-go basis, the cloud has empowered budding entrepreneurs everywhere to focus on doing business," says Singer. Cloud services can cover such things as archiving and compliance, protecting startups from the risks of being non-compliant, especially in heavily-regulated industries such as banking, education, or healthcare, where non-compliance can mean big fines. Some business-oriented security suites offer cloud-based archiving and backup, automatically protecting the data on PCs and servers with simple, online backup and recovery. ●

All About Jelly Bean

Google Releases The Latest Flavor Of Its Mobile OS

Google's hope for Ice Cream Sandwich, or Android 4.0, was to bridge the gap between the smartphone (then version 2.3, Gingerbread) and tablet (Honeycomb version 3.0) operating systems. Android 4.1 Jelly Bean, which launched in mid 2012, was less of a huge overhaul of the previous version, and more of a smoothing of edges, a series of enhancements, and a handful of performance and UI (user interface) tweaks. Google has since updated Jelly Bean twice more, released as versions 4.2 and 4.3.

If you have a relatively recent Android-based mobile device, chances are good that you're either currently, or will soon be, using one version of Jelly Bean or another. In this article we'll take a closer look at what makes Jelly Bean, in its various incarnations, such a noteworthy release from Google.

Jelly Bean 4.1

The first version of Jelly Bean came out on July 9th, 2012, and it debuted on the Nexus 7 tablet (first generation) a few days later. The primary goal of Jelly Bean's initial release was to make the user interface and overall use experience smoother, which was one of Android's biggest weaknesses compared to Apple's iOS. Google accomplished this in Jelly Bean through its "Project Butter" initiative, which improved how the underlying hardware ran the software, letting the smartphone or tablet's CPU and graphics processors run in parallel, instead of competing with one another for resources. Google's frame rate target for Project Butter was 60 frames per second. By comparison, movie and television broadcasts run



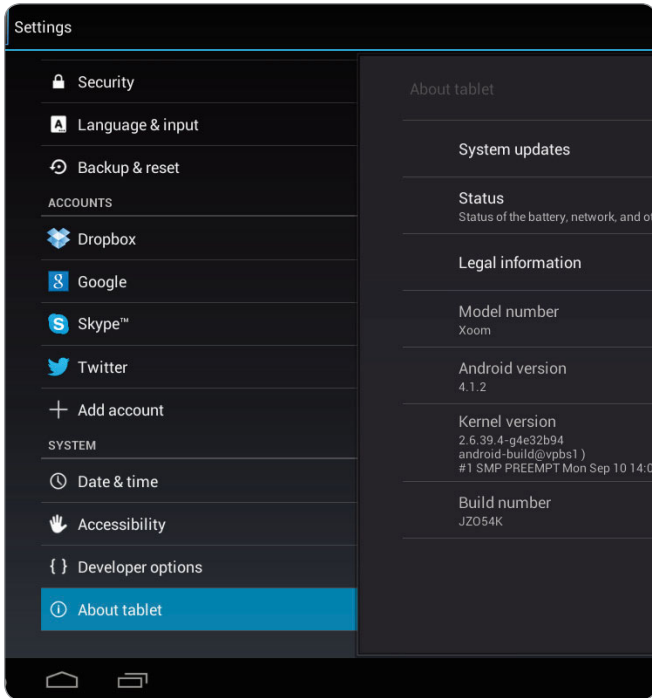
between 24 and 30 frames per second. The doubling of those frame rates on your Android device results in a "buttery smooth" experience, hence the project's name.

Jelly Bean also triples the graphics buffer, which ensures that screen movements like zooming, scrolling, and other transitions occur without a hiccup. The CPU of a Jelly Bean 4.1-enabled device runs at its full speed the instant you touch it to help eliminate input lag.

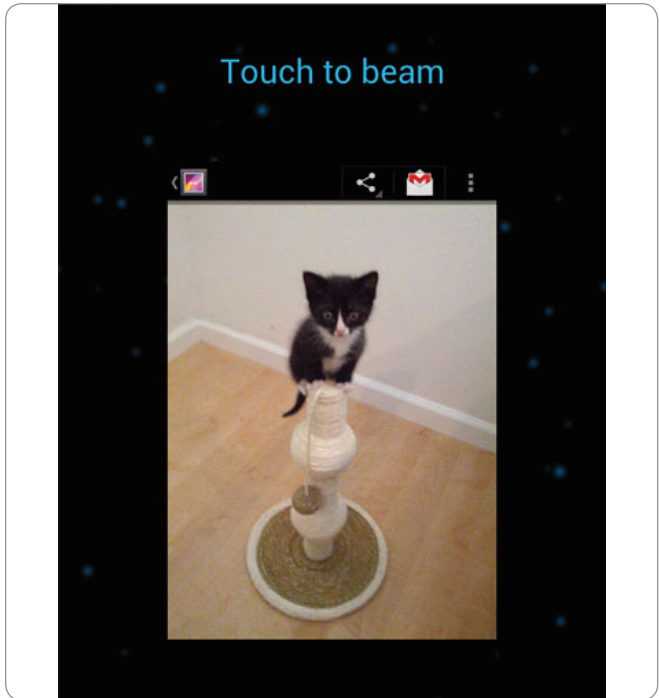
There are also a number of new features that Jelly Bean's first outing brought to the platform. Part of what makes Jelly Bean look so good is the

fact that the Android framework is now in charge of vsync (vertical sync, a feature that keeps the image from appearing to stutter or tear) timing across any and all application rendering, touch events, screen composition, and display refresh tasks. The result is a significantly smoother UI.

Jelly Bean 4.1 enables users to install their own keyboard maps. Notifications get a significant upgrade, as well; users can disable notifications for each app. Home screen widgets and shortcuts can now be manually resized to take up as many rows and columns as the user's device can maintain.



To see your current version, tap the About option from the Settings screen.



In Jelly Bean, you can use Android Beam via Bluetooth and Near Field Communication technology.

Android Beam was initially supposed to be an NFC (Near Field Communication, a short-range wireless protocol) technology, but with Jelly Bean, Bluetooth can also be used to make small device-to-device file transfers. Users who enjoyed Android's voice-based dictation service can now use it in an offline mode.

Small-screen tablets are now treated to a slightly more spacious version of the smartphone interface layout and Home screen.

Other changes: Google Wallet (on NFC-capable devices such as the Nexus 7) is a part of Jelly Bean. Google+ users can now enjoy high-resolution photos for their contacts. 4.1 also includes Google Now, which is a kind of landing page for the Google Search app that gives you time-sensitive data, such as the amount of time your drive to work or home is anticipated to be, factoring in current traffic conditions.

The update also adds support for numerous other enhancements, in-

cluding external USB audio, multichannel audio, and gapless playback, which lets one audio track fade out as the subsequent audio track fades in.

The Voice Search and Camera apps both got a significant overhaul in Jelly Bean. Google also replaced the Android browser with its mobile version of Google Chrome.

Under Jelly Bean, third-party launchers, which many Android users install to dramatically alter the look and feel of the device, can now add widgets directly from the app drawer. To do this on an Ice Cream Sandwich or earlier device, the user would need to install a launcher that requires root access.

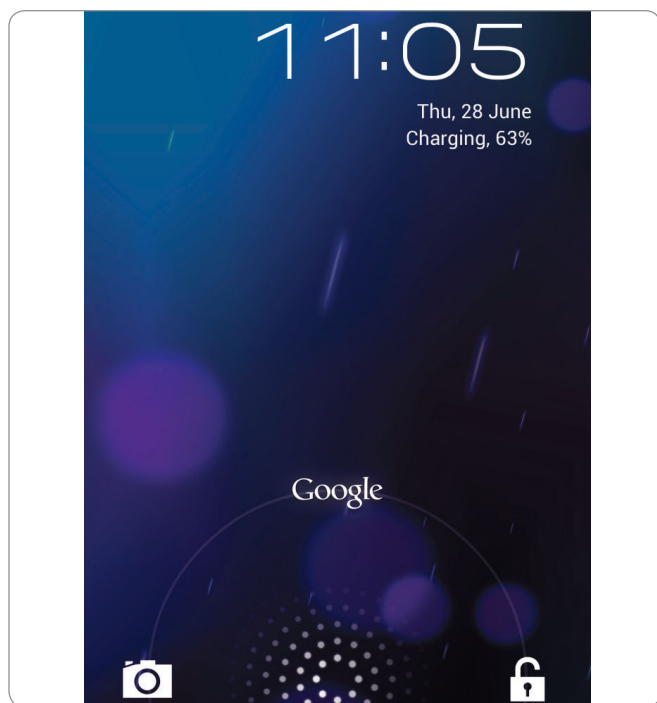
Android 4.2

Still called Jelly Bean, this version came out just a few months after 4.1, in November 2012. New features here include an enhanced Photo Sphere in the camera app that lets you take panoramic pho-

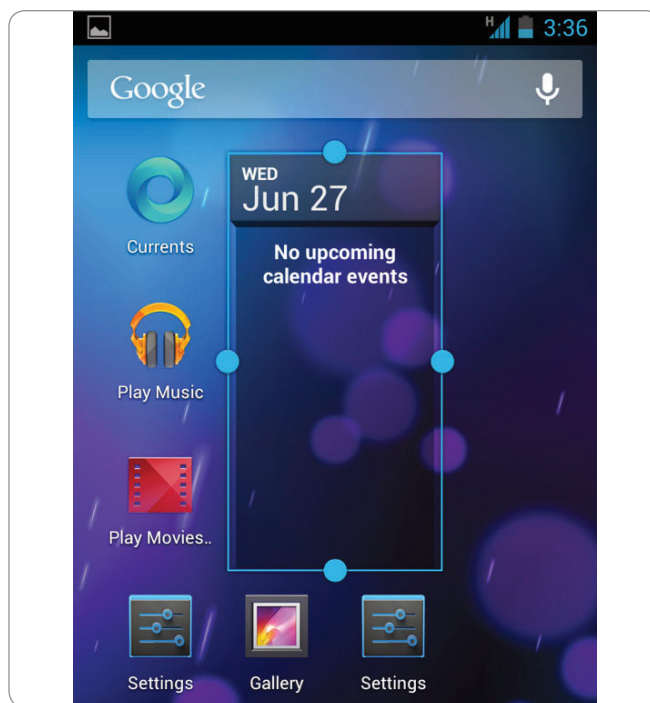
tos; support for wireless display via Miracast; gesture-based typing on the soft keyboard; power controls in the notification center; tablet support for multiple user accounts; and a revamped clock app that supports a world clock, stopwatch, and timer.

4.2's lock screen also saw some new features, including support for widgets and the ability to access the camera by swiping the unlock icon to the camera icon. When your device is idle or docked, 4.2-based devices can access Daydream screensavers, which are fun interactive little apps (some fling jellybeans, others display photos, show a digital clock, etc.) that you can access from the Display menu. Whenever the device goes idle, you can see your selected Daydream screensaver.

Android's accessibility features also got a boost in 4.2. Users can magnify the screen by triple-tapping anywhere on the screen, pan and zoom by swiping two fingers across the screen, and experience other



From the Lock screen, you can swipe to the left to quickly access the Camera app.



Jelly Bean lets you resize the widgets that appear on your Home screen.

speech and gesture-based inputs tailored to blind and visually handicapped users.

Google also unified the interface layout for all Android 4.2-based devices, no matter the screen size. The notification area can now display more extended and actionable notifications, and lets users perform certain tasks directly from the notification bar, instead of having to launch the corresponding app first.

Other 4.2 features included support for always-on VPN (virtual private network), a message confirmation whenever you're about to send a premium SMS, and OS-level support for group messaging.

Users with Android 4.2 devices can also use Bluetooth gamepads and joysticks for a more tactile gaming experience, quickly toggle Bluetooth and Wi-Fi off and on by long-pressing the respective icons, view percentage and estimated time remaining for active app downloads in the notification area, and enjoy

a snappier Gallery app. The wireless charging and low battery sounds have also been altered slightly in this version of the OS.

Android 4.3

Also known as An Even Sweeter Jelly Bean, this version of the OS keeps pushing the platform forward; it was announced just a few weeks before we went to press. Enhancements include support for Bluetooth LE (Low Energy), Bluetooth Audio/Video Remote Control Profile 1.3, and OpenGL ES 3.0, the latter of which is designed to bolster 3D gaming on Android devices.

User profiles (on tablets) can now enjoy a restricted-access mode and increased write performance. The phone app now supports autocomplete in the dial pad app.

The panoramic picture-taking app, Photo Sphere, saw several improvements, and Android's Camera app user interface was also streamlined, and users can now exercise greater control over application permissions.

Devices with this version of Android can also take advantage of more precise location-based services. Digital Rights Management APIs (application programming Interfaces) also get an overhaul in this version, with the intent of better protecting media copyrights. The latest Android's OS also includes support for Ultra-HD 4K resolutions.

A Sweet Surprise

It's fair to say that Google's Android platform is ever evolving. Jelly Bean, in its various iterations, has effectively unified the UI between tablets and smartphones, significantly improved the user experience, and made the platform more approachable for novices and more powerful for hard core enthusiasts. But Google isn't finished: The current buzz suggests that we could be sinking our forks into the next version of Android, to be called Key Lime Pie, later this year. ●

Eight Update

What To Expect From Windows 8.1

Windows 8 is quickly approaching its first anniversary since launching in October 2012. According to the market analytics firm Net Applications, as we went to press, its market share stood at 5.42%, behind Mac's 7.28%, Windows XP's 37.02%, and Windows 7's 44.5%. We're going to go out on a limb here and speculate that Microsoft had higher hopes for Windows 8's first year than to simply stomp Linux (1.26%) and Windows Vista (4.26%). But it's still very early in the operating system's lifespan, and many businesses make it a point to hold off on upgrading to the next OS until after the first big update. If this is you or your business, then this article is for you. Windows 8's first big update is almost upon us, and it's called Windows 8.1. Read on for everything you need to know about how Windows 8.1 makes a compelling case for an upgrade.

Windows 8 Reset

Anytime Microsoft endeavors to update its latest OSes, it usually looks to patch security vulnerabilities, squash any post-release bugs, streamline user interfaces, add support for the latest technologies, and respond, where possible, to customer feedback. This time around is no different.

Microsoft's goals for Windows 8.1 include filling out the Windows Store with more apps you know and love, enhancing and improving the Bing-powered Search charm, speeding up startup and shutdown times, improving overall system performance, and more.



The Windows 8.1 Start screen gets a handful of visual tweaks.

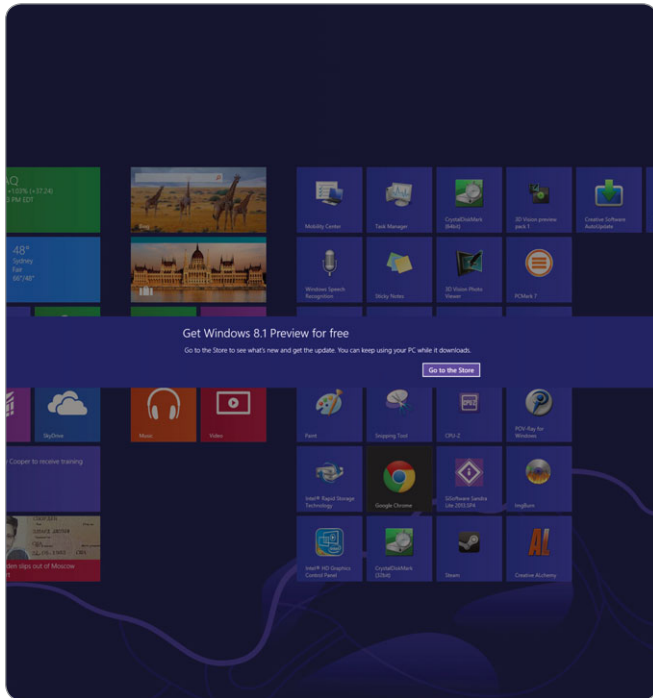
Get Windows 8.1

When it becomes available, possibly by the time you're reading this, it'll be very easy to obtain the Windows 8.1 update. Microsoft is treating it like an app in the Windows Store. Just launch the Windows Store by clicking or tapping its tile on the Start screen, then tap or click the large Windows 8.1 tile on the Windows Store main page to download and install the update. You can back out of the Store and continue to use your device while the update downloads and installs. If you're reading this prior to 8.1's official launch, you can download

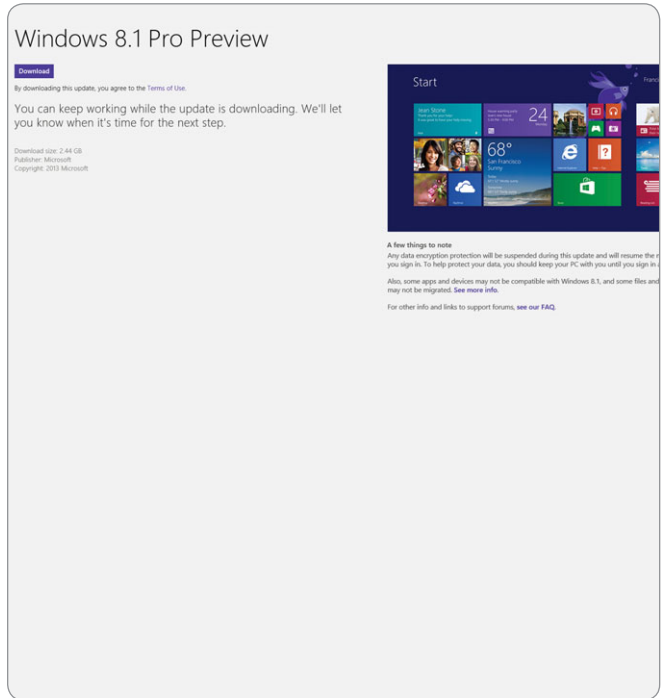
the Windows 8.1 Preview from <http://snipurl.com/27jt8q2>. (Or just Google "Windows 8.1 preview.") Click the Get It Now icon and follow the onscreen prompts to install the update. Keep in mind that because we used an earlier preview, some procedures and features may differ slightly from your preview and from the finalized update. Our installation experience involved a couple of restarts before the update was successfully applied.

8.1 In Action

The first thing you'll notice upon restarting your Windows 8.1 device



We got a look at Windows 8.1 by installing the Preview from Microsoft's website.



While the update was installing, we were free to perform other tasks.

is the return of the Start Button. This is a familiar Windows logo that appears in the lower-left corner of the screen when in Desktop mode. Click it to display the Start screen apps. But rather than pulling you out of Desktop mode like Windows 8 does, the new version simply overlays the app tiles on your Desktop, which makes traversing the two modes a much less jarring experience.

Windows 8.1 also gives you a lot of control over what happens when you put your cursor into the four corners of the screen. Don't like that the Charms bar or app switching bars appears when you move your cursor to the right or left corners? You can change that.

Another feature that many Win8 detractors begged for is also available in the update: You can now boot directly to the screen you want, for instance, Desktop mode or the Apps view. From the start screen, you can also swipe down from the Start screen to view the Apps screen;

here you'll find all apps you've installed, including those that are not pinned to the Start screen.

You can add photos to a cycling collage that appears on the Windows 8 Lock Screen. Photos that populate the slideshow can come from either the local folders or from the SkyDrive cloud-based folders. In this way, you can keep your Lock Screen looking fresh on virtually any computer or device.

Another feature that falls in the eye-candy category is a host of new Start screen backgrounds and the ability to tweak the background's primary and secondary colors to give your system a much more customized appearance. Some of the new backgrounds will act like live wallpapers, responding to the movement of tiles and other elements. Windows 8.1 also brings with it the ability to keep your Desktop background consistent between screens, applying it to the Start screen as you see fit.

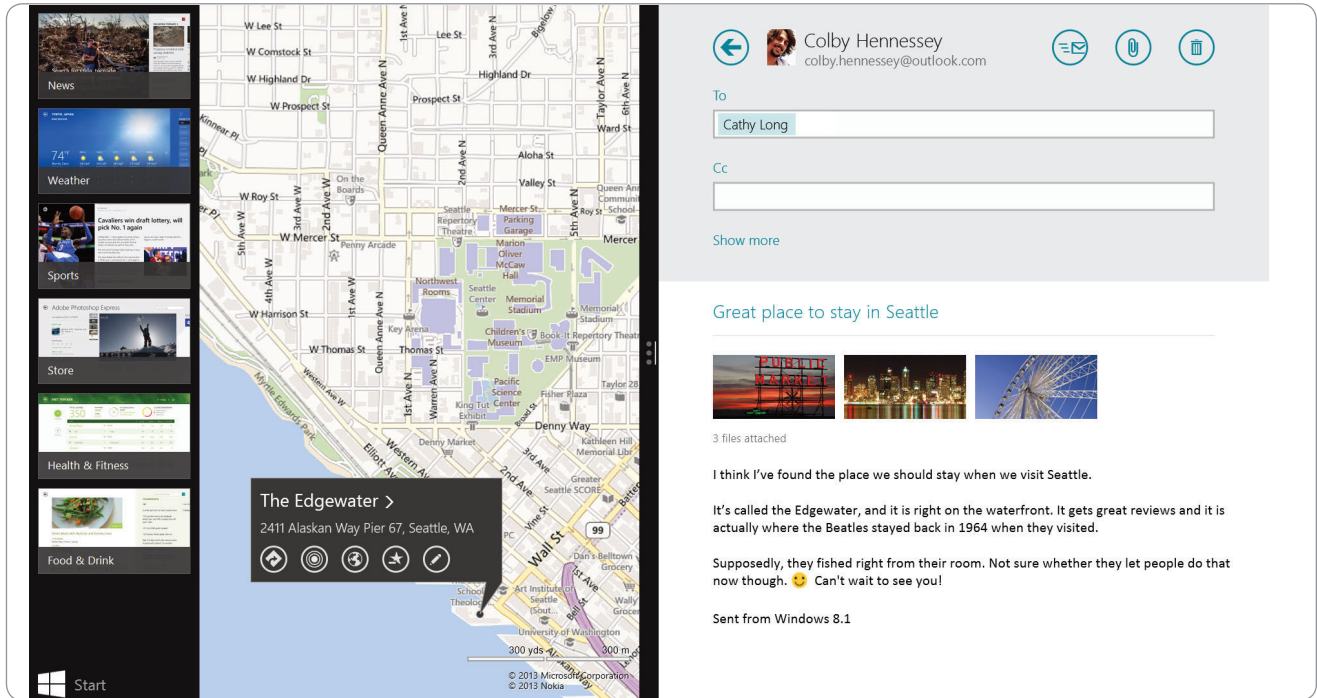
Prior to the update, tiles on the Start screen could be either wide or narrow, but after the update, you'll also be able to make tiles large (essentially the size of two wide tiles) and small, which makes the tile roughly a quarter the size of a square tile in Windows 8. To resize a tile, just tap and hold your finger on a tile, or right-click the tile, click **Resize** from the menu that appears at the bottom of the screen, then choose a size.

Although pre-update Windows 8 let you group and name columns of apps on the Start screen, it's much simpler in Windows 8.1. You can also select and resize, uninstall, or group multiple apps at once.

The new update also makes sure that apps and Web pages display properly on a variety of screen sizes, aspect ratios, and resolutions.

Tech Injection

Windows 8.1 adds support for a variety of new technologies, includ-



Windows 8.1's enhanced Snap modes make it easier to multitask. Those with multiple monitors can exercise even more control over what appears on each one.

ing Bluetooth 4.0 LE, which stands for Low Energy; it essentially lets your Windows 8.1 device interface with select Bluetooth devices in a much more energy-efficient way.

If you have a Windows 8.1 device with access to mobile broadband, the OS will now boot and resume from a sleep state more quickly. Additionally, a new features called InstantGo maintains a network connection to keep your Start screen live tiles, apps, and other data in sync and up-to-date, even when the device is in a connected standby state. Microsoft claims that devices that support this feature can go from a connected Standby mode to a fully operational mode in less than 300 milliseconds. The suspended power state is also energy efficient enough to allow two week-long standby battery life.

A New Browser

If Windows 8.1 were to show up riding a motorcycle, Internet Explorer would be in the sidecar. This new

browser version features a number of enhancements, including improved touch performance, faster page load times, and the ability to display the address bar at all times. IE11 also lets you have as many simultaneous tabs open as you want. And if you use multiple Win8.1 devices, you'll be able to access those tabs from any of them.

Windows 8.1 also supports new touch-based gestures, and Internet Explorer 11 follows suit. From the browser, you can use gestures to select text and correct spelling even faster than before. If you have a Windows 8.1 device with a touchpad, then you'll be able to perform familiar touchscreen gestures there.

Better Search

The new Windows 8.1 search tool is significantly enhanced. It's powered by Bing, and it gives you near-instant access to the Web, your files, apps, SkyDrive files, and more. Using the Search charm from Desktop mode also keeps you in

Desktop Mode rather than moving your view to the Start screen.

Multitasking Guru

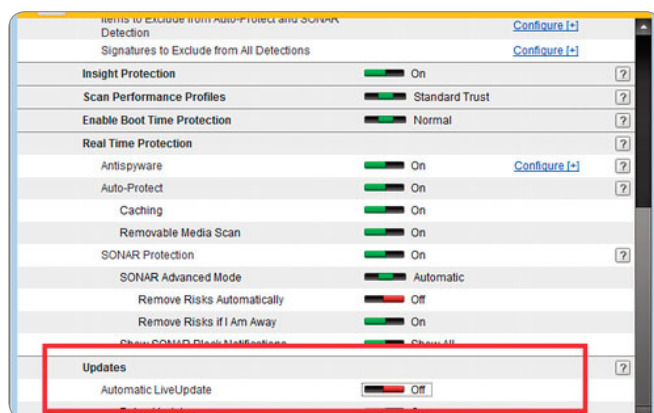
Windows 8.1 also offers a handful of new Snap modes, or the ability to display two or more windows or apps simultaneously. You can resize and display up to three apps onscreen at a time, and those with multiple-monitors will appreciate the ability to run the Start screen on one display and multiple apps on secondary or tertiary screens.

8 Point Wonder

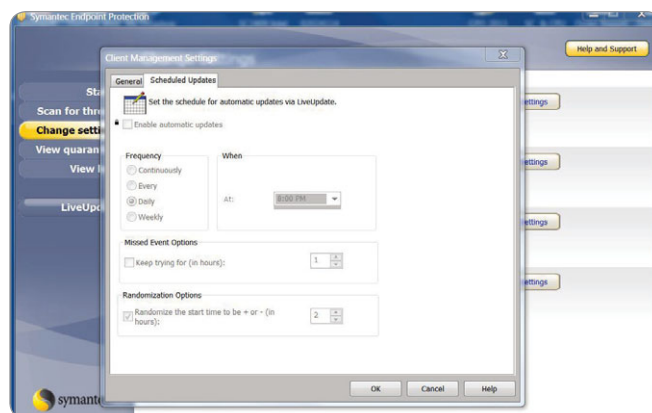
In this article, we've only just scratched the surface of what Microsoft has crammed into this update. So far, we can say with confidence that the OS is significantly easier to use, better looking, and more business friendly, thanks to the enhancements. For the full scoop, check out *Smart Computing's* coverage following Windows 8.1's official release. ●

Souped Up Antivirus

Get More Out Of Your Security Software



You may need to turn on automatic updates in your antivirus application.



Some security applications let you configure how often the program checks for updates.

Antivirus applications and security software require some routine maintenance to ensure that you'll be completely protected. For example, viruses and spyware are constantly evolving, and new types of malware are created every day. Thus, it's important that your security software has been updated with the most current patches and data, so it can detect the newest threats. We'll explain what you should do to optimize your security software.

Automatic Updates

Even the most dedicated PC owners will forget to manually patch their security software each and every time they boot up the computer. Fortunately, most security applications offer an option to automatically check for and install updates. For example, the Staple's Easy Tech PC Virus Protection plan lets you set up both automatic and manual updates. Generally, you can set up

a time and day for the PC to check for new malware definitions. You should also set up Windows itself to automatically install its own system updates and patches, because operating system vulnerabilities could create holes that your security software won't be able to block.

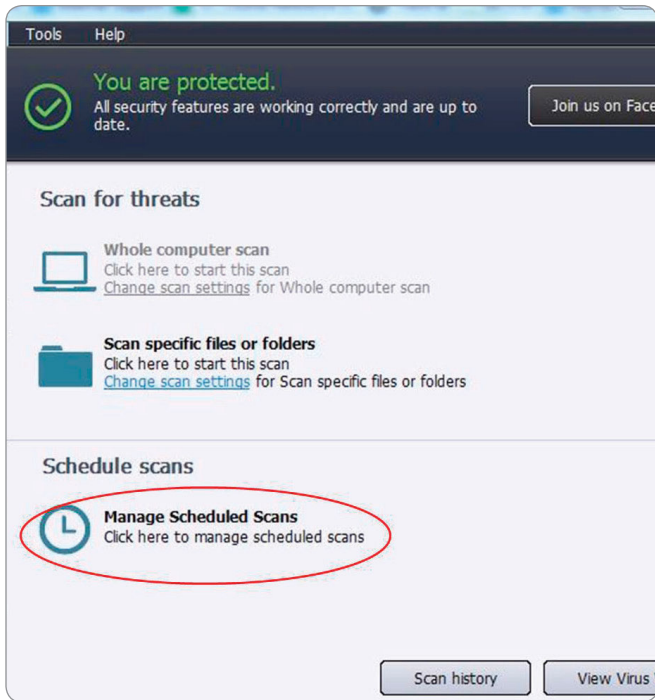
Regular Scans

Most security programs also let you schedule scans for specific times and days. Of course, you'll want to select a period when the PC will typically be on, because the scan won't run if the computer isn't running. If you're the type of person who works better by checking off to-do lists, you may wish to create a weekly computer maintenance checklist that includes a security scan, among other PC-related tasks. Other popular weekly tasks might include emptying the Windows Recycle Bin, deleting temporary Internet files, and cleaning up the icons on your Desktop.

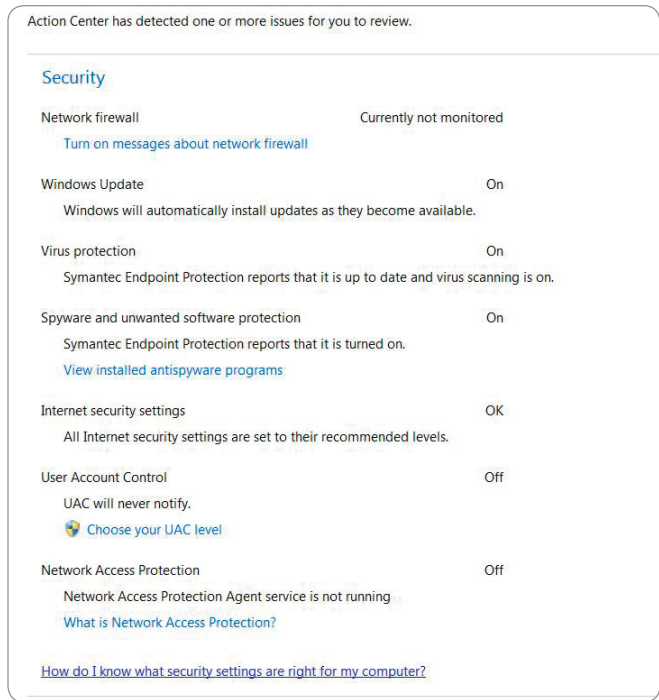
Security Suite Features

Modern cyberthreats require more than just an antivirus application, which is a good reason to invest in a security suite that includes antivirus, antispyware, a firewall, and anti-phishing tools. Protecting against spyware is especially important, as things such as adware and rootkits can infiltrate your PC through your Web browser—and an individual standalone antivirus utility may not catch those sorts of attacks. (Rather than trying to harm your PC, spyware threats attempt to secretly monitor your computer to gather and steal personal information, such as usernames, passwords, or credit card numbers.

Even if you've invested in a security suite, it's possible that not all of the tools may be running by default. You can visit the Action Center in Windows 7 and Windows 8 to see which utilities are running; this will help you monitor key areas of con-



Set up a schedule to scan your PC. You may be able to configure it to scan as often as once a day.



The Action Center in Windows is where you'll find out which security applications are running on your computer.

cern. To access the Action Center in Windows 7, click the Start button, select Control Panel, choose System And Security, and click Review Your Computer's Status. Click the Security section to expand the Action Center's breakdown of your operational security. In Windows 8, access the Start screen and type **action**. Then, click (or tap) Settings and select Action Center. Click the Security section to view the list of actionable security items. Just a few of the most important include Virus Protection, Network Firewall, Spyware And Unwanted Software Protection, and Internet Security Settings.

Recognize & Mitigate Security Risks

If you're running a small business, you may end up with security software that's designed for much larger enterprises, which can lead to struggles when it comes to installation and management. If you're spending

too much time dealing with administrative issues, or if your security software is bogging employees down, the total cost of securing the business may be more than you bargained for. In that case, look for security software that makes it easy to automatically apply the same security settings to multiple machines. This way, it's less likely that someone will want to turn off the protection and end up becoming the weak link in the chain.

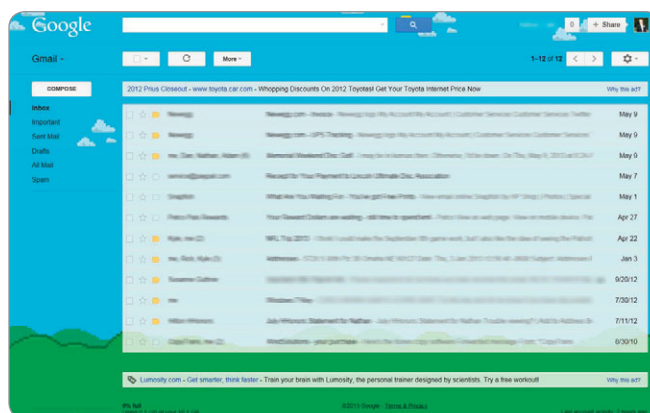
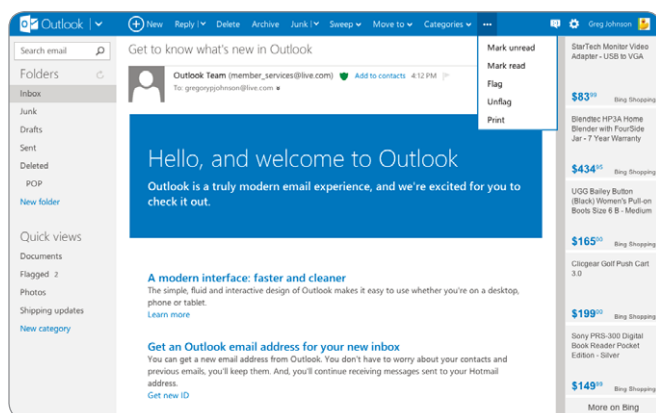
Another way to mitigate risk is to invest in a security tool that uses heuristics to monitor the Web traffic coming and going through your PCs to prevent even the types of attacks that aren't covered by the virus definitions on your PCs. Some security applications can also limit employee access to certain Web sites, applications, games, and social networking sites. ●

Why Pay?

Sure, there are lots of free antivirus applications available, many of them quite good. And Windows comes with its own firewall and spyware protection. However, those tools may not offer complete protection against things such as email spam and phishing messages. When you pay for a security suite, you'll be able to manage all of the features in a single application, you'll likely enjoy coverage that's more complete than what you'd get with free security applications, and you'll almost always also get better technical support.

Webmail's Evolution

From Simple Email To A Universal Online Passport



With Outlook.com, Microsoft reduced the header spaces to provide more room, and commands now only appear when relevant.

The basic Gmail interface, with its informal style, is relatively unchanged from 2004, although new tabs and threading options have been added.

This May, Microsoft officially ended its time-worn Hotmail service and replaced it with Outlook.com. To give you some perspective as to Hotmail's popularity, over 300 million still-active Hotmail accounts were migrated to Microsoft's streamlined Outlook.com interface. (Hotmail users were able to keep their existing email addresses.) Webmail services have steadily evolved from a basic email service, whose availability on any Internet-connected PC complemented a desktop client, to a complete email tool on which you can rely as a primary account. We'll take a look at how the individual services have changed from their humble beginnings.

What Is Webmail

Webmail is an email service in which all of your email, calendar, and contacts are stored online. The advantage of this design over a traditional "local" email client is that you'll be able to access your email on any Internet-connected device. The online service

means you won't need to lug around your PC just so you can read and respond to email, nor will you need to remember a client's email, because it will be stored in your contact list (assuming you've emailed them before). For some Webmail services, the email address also serves as your digital identity, letting you access Web-based tools created by the webmail provider, such as online calendars or video chat utilities. For example, Microsoft's Outlook.com (the Webmail cohort to Microsoft's Outlook desktop email client) provides you with access to SkyDrive cloud storage (7GB for free), Skype audio and video conferencing, and a calendar that lets you create and change appointments, as well as sync with other services (like Google Calendar).

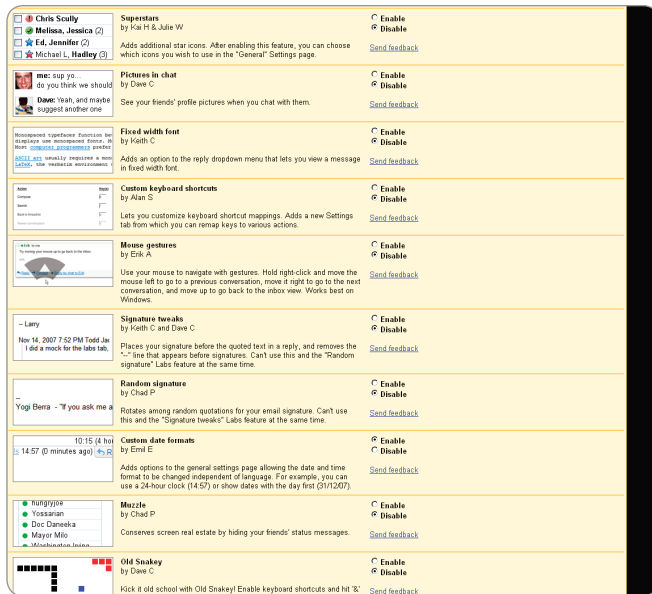
Hotmail/ Windows Live/ Outlook.com

Hotmail was started on July 4th, 1996. It was originally capitalized as HoTMaiL to help people identify the service as one used with HTML format-

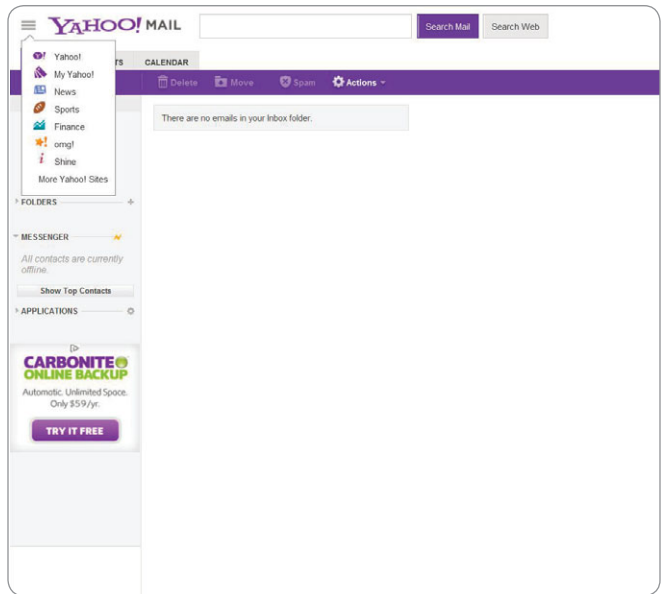
ting. Windows Live Hotmail was born on May 6th, 2007, touted as offering a safer, more productive experience, thanks to better spam filters. Windows Live Hotmail also came with an Outlook Connector utility that let you manage Windows Live Hotmail from your Outlook desktop client.

September 2009 saw Microsoft announce Office Web apps with versions of Word, Excel, and PowerPoint that let you access, share, and work on Office documents through your Windows Live account without needing to actually purchase and run a full version of the Office software.

Outlook.com was officially announced on February 18, 2013. It can sync with your social networking accounts to ensure that your contact is always up-to-date. One of the most powerful features of Outlook.com is its ability to automatically sort through your email, as it can determine which messages are newsletters, shipping updates, social posts, and emails. Attachment limits are moot, as you can



Gmail Labs allowed users to experiment by using extra features that were still under development.



The newest version of Yahoo! Mail offers a cleaner style than its predecessor.

insert files and picture directly from the built-in SkyDrive account in order to share them in an email.

Gmail

Google's webmail service has now been around for 9 years, and as of July 2012, it had over 425 million active users. Although much of the interface has stayed the same, Google has made continual improvements to the service over the years. For example, Google upped the storage limit from 1GB to 2GB to celebrate its first birthday, and within the first two years, the search giant added Google Calendar and Google Chat capabilities to Gmail.

One of the key early benefits of Gmail was (and still is) that it offered threaded email conversations, so all related messages can be stacked together. Gmail Labs was another unique feature added by Google. This test area was a place where Google engineers could try out ideas they had or popular suggestions from users to see how well they would work. Some of the tools that eventually graduated from Gmail Labs included Tasks (lets you create a Task list in a sidebar that was saved to the Google Calendar),

Forgotten Attachment Detector, YouTube Previews, Custom Label Colors, and Vacation Dates. (Google Labs was discontinued in 2011, though vestiges of it remain.)

Gmail has always tried to keep up with rising email storage demands (longtime users will remember the daily capacity counter), and in November of 2012, Gmail was made to work with Google Drive storage to let you insert files up to 10GB in size. Gmail also continued to upgrade video conferencing and chat, and in July of 2012 Gmail merged with Google Hangouts to upgrade video conferencing to allow up to 10 participants. A Gmail address now also serves as a passport for various Google services, such as Google Docs, and as an ID for Google Drive on Android devices.

Yahoo! Mail

Yahoo! Mail was launched in October, 1997, and was based on the RocketMail product originally developed by the Four11 Corporation. At first, Yahoo! Mail provided users with 3MB of storage capacity. It also supported multiple media options, allowing users to send and receive HTML

documents and audio/video. In 2006, a new interface was launched that included drag-and-drop organization, a reading pane, the ability to have multiple messages open at once, address autocompletion, and a search feature.

In December of 2012, Yahoo! launched a redesigned Yahoo! Mail with a new interface that provided a consistent look across Windows 8, iOS devices, and Android devices. With the latest version, you can import contacts from Facebook, Gmail, Outlook, and other online accounts, and instant messaging is built in.

More Mobile

All of the major webmail providers we covered here are moving toward adding more mobile features, which means that eventually your email login will serve as a kind of one-stop-shop for your digital life. Integration with your calendar and to-do lists were an obvious place to start, but now webmail applications are merging cloud storage, social networking, and collaboration tools to give you more ways to conveniently share your photos, videos, documents, and other files. ●

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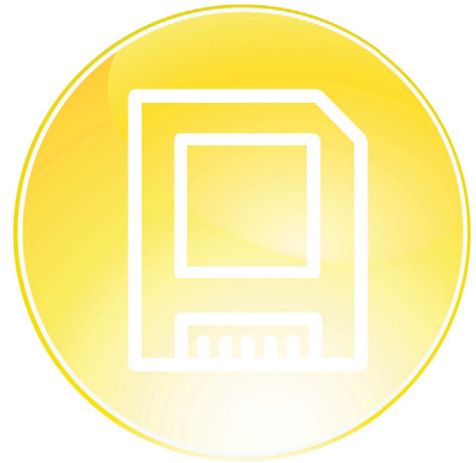
STEP 2. Click on Register

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Troubleshooting Reference: MEMORY



PROBLEMS WITH YOUR PC'S MEMORY, or RAM (Random Access Memory), can result in a variety of issues, including seemingly random freezes, crashes, and system errors. When you're seeing these types of issues, there are no obvious error messages that indicate something is wrong with the memory in your computer. Here, we'll show you how to discover if your RAM is the problem and give you some ways to fix it.

Is It A Memory Issue?

The most common manifestations of RAM problems are operating system crashes or applications that hang or won't respond. If you're experiencing these issues, try running an anti-

virus scan with your security software just to be safe, because a virus can cause similar symptoms.

Memory Analysis

Windows 7 includes the Windows Memory Diagnostics Tool, which will help you detect problems with your computer's RAM. To manually run the utility, click the Start button, select Control Panel, and type **memory** into the search box. Select Diagnose Your Computer's Memory Problems under Administrative Tools, and you'll see two options. You can choose to have Windows restart right now and check the memory, or you can tell it to wait until the next time you reboot your PC.

If the Windows Memory Diagnostic finds errors, you'll see a pop-up that tells you where the memory failed. In this case, you'll likely need to replace the memory to fix the problem. If the utility detects no errors, no message will be displayed and Windows will go ahead and load your Desktop.

Quick Fix

Nearly all PCs contain more than one memory module. It's possible that only one of the sticks of RAM is causing the problem, so try removing one and see if that fixes the issue. Continue switching out the memory until you find the memory stick that's causing the problem. ●



Need More Help?

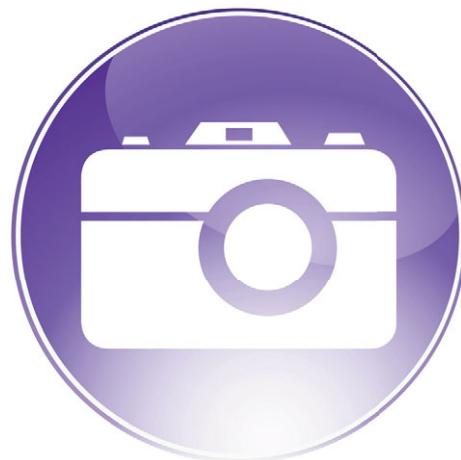
Can't find a solution to your problem? You can always take your device into Staples for help. You can also order Staples EasyTech help online, and arrange for an EasyTech associate to troubleshoot remotely via the Web or even come to your home to work on your device. Go to www.staples.com/easytech or call 1.800.378.2753.

Fix-It Checklist

When your PC's memory is causing problems, you'll need the following things to get it fixed up.

- ✓ Phillips-head screwdriver to remove side panel or laptop panel
- ✓ A functional, up-to-date copy of Windows
- ✓ Users manual for your computer

Troubleshooting Reference: **DIGITAL CAMERAS**



WE'VE COME TO RELY ON DIGITAL CAMERAS to capture the special moments in our lives. And if you miss a moment because your camera isn't working or produces poor-quality images, it can be frustrating. Here, we'll provide some quick tips for resolving a few of the most common issues.

Clean Off The Lens

So you've just snapped a few photos of the family dog, only to find that most of them have been ruined because a certain pooch left his noseprints on the lens. The same problem can occur if dust builds up or when you accidentally touch the lens with your finger. Breathing across the lens and wiping it off with a soft, micro-

fiber cloth will remove most marks. For stubborn fingerprint oils, you may need to use a lens cleaner. Lenses typically have special coatings, so you'll want to avoid any household cleaning products that could mar the coating.

Battery Life

When you first got your digital camera, the battery lasted for several hours before it needed to be recharged. But over time, a battery wears out; eventually, it may only give you enough juice for a few shots. If you're experiencing this problem, you'll likely need to invest in a new battery. If you see a white flaky material on the old battery, it's likely that it was leaking and that residual acid has corroded the con-

tacts. You'll need to clean the contact pads with a brush and fine sandpaper before you install a new battery.

Shots Are Dark Or Off-Color

Many point-and-shoot cameras use small image sensors that have trouble gathering enough light in low-light environments. You may be able to compensate by switching to a shooting mode in which the camera opens the shutter for a longer period of time, but then the camera must be held steady to avoid blur. It may be easier to move the subject to a location where there is more light, or to better illuminate the scene by adding more light with a flash or by opening a curtain. ●

Prevention

Digital cameras are fairly durable devices, but you'll want to keep them away from liquid, sand, and dirt. Liquid can short out the internal circuitry, while sand and dirt can scratch the lens and other parts inside the camera. The internal circuitry and glass lens (and internal mirror, if your camera has one) can also be damaged if you drop the camera, so remember to keep the neck strap on while using it.

Fix-It Checklist

Here are the tools you'll need when troubleshooting a digital camera.

- ✓ Microfiber cloth
- ✓ Lens-cleaning solution
- ✓ Soft brush
- ✓ Fine sandpaper
- ✓ Backup batteries

Troubleshooting Reference: NETWORKING



A down, slow, or unreliable network can lead to significant downtime and frustration. Here, we'll help you troubleshoot a few of the most common network problems.

Try The Power Cycle

When it comes to the physical network, there are two devices that can possibly fail: the router and the modem. Both have simple fixes. Turn them off, wait ten seconds or so, and turn them back on again. This "power cycling" will resolve many network issues. For example, the router may have had a problem renewing its IP address or releasing new IP addresses for the computers on your network. Restarting the router or modem resets

the device's software, often solving these sorts of problems.

Examine Your Network Adapter

If that didn't solve the issue, check the PC's network adapter. The Network Diagnostic utility built into Windows 7 can renew your computer's IP address and ensure that the network adapter is enabled. To run Network Diagnostic in Windows 7, click the Start orb, select Control Panel, choose Network And Internet, and select Network And Sharing Center. Under View Your Active Networks, select the link next to Connections and click the Diagnose button. Windows will run a few tests to try and fix the problem.

Weak Wireless Signal

Watch out for nearby devices such as microwaves, Bluetooth devices, baby monitors, and phones, all of which can cause interference in the signal. Move your router someplace where it's less likely to experience interference.

Intermittent Connection

You'll want to check the physical connections to your router to see if all the cords are securely connected. A loose connection may explain why the Web drops intermittently. It's possible that the cable may have a cut or kink that causes a fault in the connection. Try replacing the Ethernet cable. ●

Prevention

Wireless signal interference will typically be worse if the device causing the problem is close to the router. Try moving your router or PC to a different location, where the interference will have less of an effect. (And see "Troubleshooting Reference: Wi-Fi Connection" in this section for more information.)

Fix-It Checklist

Here are the tools you'll need when troubleshooting your network.

- ✓ Extra Ethernet cable to replace bad or kinked cable
- ✓ Unused outlets for alternative locations to place wireless router
- ✓ Users manuals for routers and other networking equipment

Troubleshooting Reference: WI-FI CONNECTION



INTERNET CONNECTIVITY HAS BECOME synonymous with “smart” when it comes to consumer electronics and appliances. But if your Wi-Fi connection goes down, you might have a hard time adjusting to a Blu-ray player that just plays Blu-ray Discs, a phone that only makes phone calls, and a tablet that just plays games. Follow these Wi-Fi connection troubleshooting tips to “smarten up” your favorite gadgets.

Device Fails To Detect A Wi-Fi Network

The first thing you should do is find another Wi-Fi-capable device and attempt to connect to the Wi-Fi network. If the second device also cannot locate the SSID (Service Set Identifier), or Wi-Fi network name, then turn your attention to the wireless router.

Most routers have LEDs that indicate connection status, so consult your manual and determine if the router appears to be operating normally. The manual also provides instructions for accessing the configuration menu, so check this to make sure you actually have a wireless network up and running. Reset your security password if necessary. Make sure that your router is configured to broadcast the SSID, at least while you’re troubleshooting. (You may wish to stop broadcasting once the problem is resolved.) Also, check the wired devices plugged into your router to determine if the router itself is malfunctioning. Finally, restart

your PC and any device that has failed to connect to the wireless network. If the connectivity issue is isolated to a single device, disabling and re-enabling Wi-Fi may solve the problem.

The Wi-Fi Network Is Working, But There’s No Internet

You may need to reset your Internet connection. Unplug the wireless router and modem. Next, plug in the modem and wait ten to twenty seconds for the lights to come on and then plug in the router. If your modem has a battery backup, you may need to press a recessed button to reset it. Check all Ethernet cables for loose connections and then try to find your Wireless network with your Wi-Fi-based devices. ●

Prevention

A Wi-Fi network requires little maintenance. If you regularly maintain your PC, modem, router, and wireless devices, the network should continue to operate flawlessly. You may experience speed fluctuations if there are too many devices or appliances nearby that operate on the same frequency; minimize this problem by keeping your wireless router and Wi-Fi devices away from cordless phones, microwaves, wireless game controllers, Bluetooth devices, and even fluorescent lights.

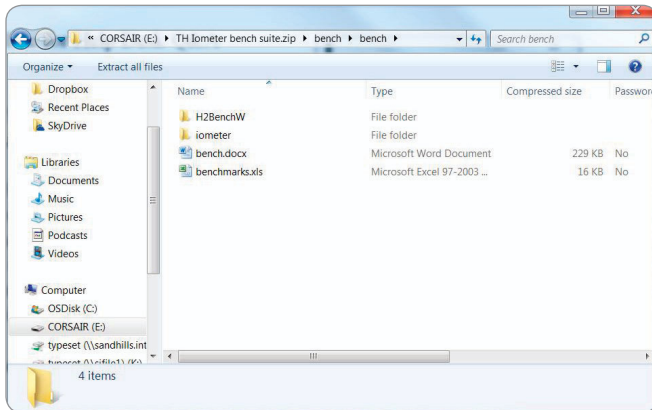
Fix-It Checklist

It’s helpful to have a few things on hand when your Wi-Fi network fails. Here’s a short checklist that’ll help you solve the problem.

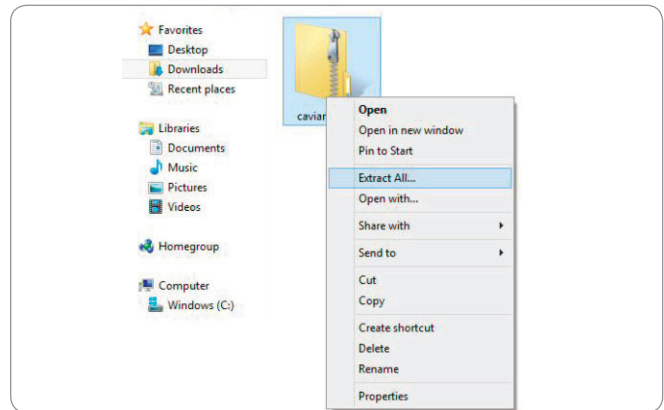
- ✓ A spare device that supports Wi-Fi
- ✓ Wireless router or adapter driver discs
- ✓ Manuals for your router and modem
- ✓ Alternate Wi-Fi router
- ✓ Spare Ethernet cables
- ✓ USB Wi-Fi adapter

Tips From The Help Desk

Common Tech Questions



Windows 7 has a built-in utility for unzipping compressed files.



You can right-click a folder to unzip it in Windows 8.

Q. Some of the files I download are stored in a .ZIP file format. What type of file is that, and how do I open the ZIP file?

A. Many software designers and device manufacturers opt to compress files to reduce the time it takes to download applications and drivers. Both Windows 7 and Windows 8 come with a built-in tool for decompressing zipped files. To extract a ZIP file in Windows 7, double-click the zipped folder. You can then drag the files one-by-one to a folder, or click the Extract All Files button near the top of Windows Explorer.

If you run Windows 8, you can unzip the folder by opening the folder in Windows Explorer.

Place your mouse pointer at the upper-right corner of the screen, move the pointer down to Search, and click Search (or if you have a touchscreen, swipe in from the right edge and tap Search); enter **File Explorer** in the search box. Then, click Apps and tap or click

File Explorer. Once you find the zipped folder, you can drag and drop the files or move everything into a different folder by clicking (or tapping) Compressed Folder Tools and selecting Extract All.

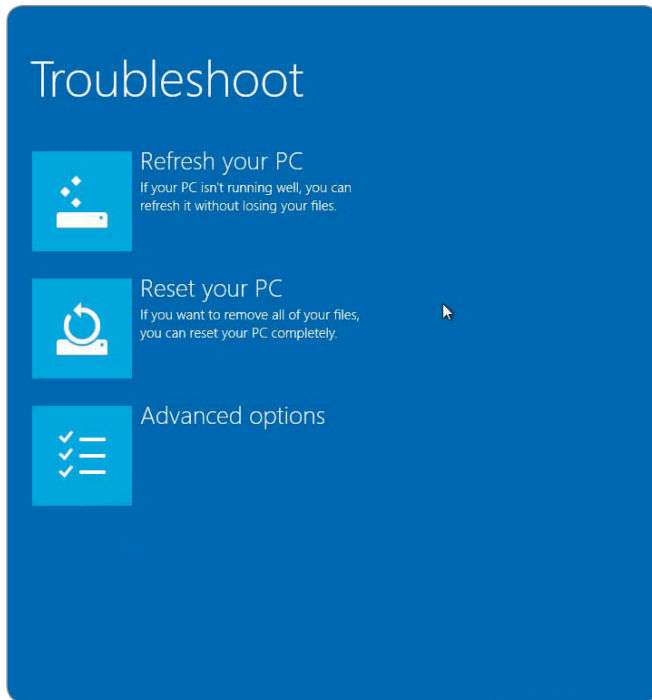
Q. What Is System Restore and how do I use it?

A. Mistakes can happen. Maybe there was an error during a program installation that caused an application (or Windows itself) to stop working, or perhaps a Windows update conflicted with another application on your computer. If you've tried basic troubleshooting steps to solve a problem, but nothing seems to make a difference, the System Restore feature found in Windows 7 and Windows 8 may do the trick. It returns the system files (the ones that control your OS (operating system) and applications to a state before the problem occurred.

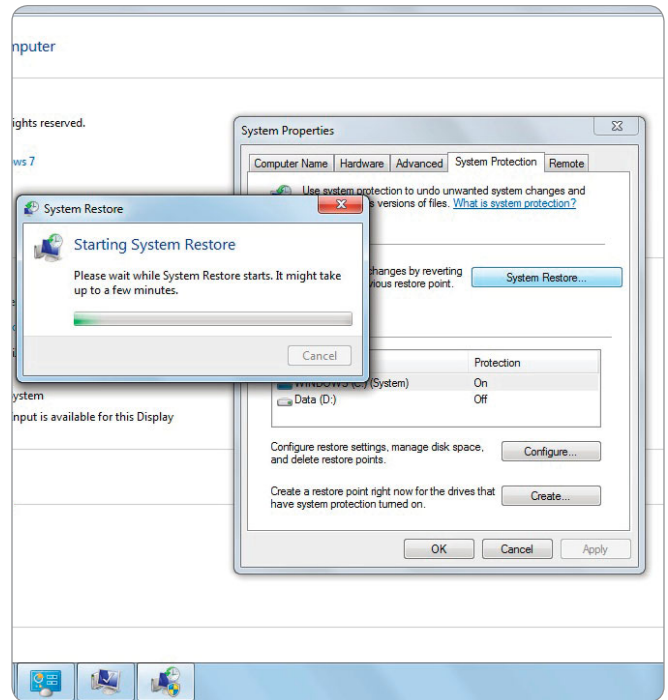
There are several situations in which it'd be ideal to use Sys-

tem Restore: Was your computer working fine before installing a new application, updating Windows, or connecting a peripheral, such as a printer or mouse? Did your PC have a virus that you had to remove with your security software? The System Restore feature can come in particularly handy when a device driver or application problem prevents Windows from starting. You can run the System Restore tool in Safe Mode, a startup mode that launches only the files, settings, and drivers necessary to run Windows. Thus, in Safe Mode, you could load your previous Restore Point, even when the PC isn't functionally, and return your computer to a working state—eliminating the need to find another driver or reinstall Windows to fix the problem.

Even if you haven't made any obvious hardware or software changes, performing a System Restore is a wise idea if your computer was working fine but has begun to freeze or crash on a



You can reach System Restore in Windows 8, even when your PC is having trouble booting.



Windows will restart your PC after it begins the restoration process.

regular basis. Keep in mind that loading a Restore Point will remove any applications you may have installed between now and whenever the Restore Point was created. To use System Restore in Windows 7, click Start, select All Programs, choose Accessories, and click System Restore. At the Restore System Files And Settings dialog, click Next. You should see the most recent restore points that Windows has created. (You can click the Show More Restore Points checkbox if you need to see older Restore Points.) Select the Restore Point to which you want to return and click Next. At the Confirm Your Restore Point dialog, select Finish, and Windows 7 will begin the restoration process. Follow the prompts to resolve your issue, and when finished, Windows 7 will indicate that System Restore Completed Successfully.

In Windows 8, navigate to the Start Screen and type **Restore**

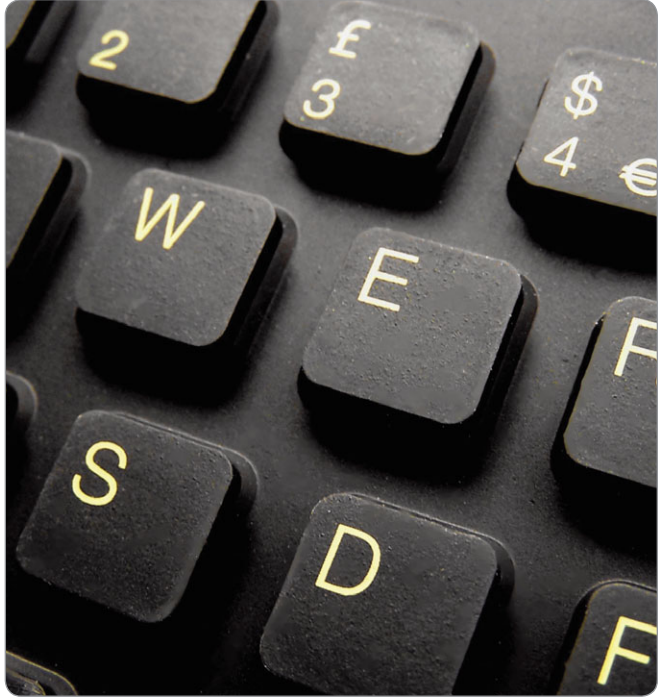
Point. Select the Settings category and select Create A Restore Point. This will load the System Protection tab of System Properties. Click the System Restore button and click Next. At the System Restore screen, you can select from the available Restore Points. If you need more, click the Show More Restore Points checkbox. Once you select a specific Restore Point, a Scan For Affected Programs button should appear; click it to see what moving to the Restore Point will change. Click the Next button if you're ready to continue. Click the Finish button. After confirmation, System Restore will reboot your PC and begin making the changes. When the restore is finished, you should see a System Restore Completed Successfully message.

Q: My old mouse failed. What should I look for in a new model?

A: There are a surprising number of choices you must make when choosing a mouse. Do you go wired or wireless? Do you want a portable model that's ideal to carry with your laptop or a larger model that's designed for comfort? Do you want a basic two-button mouse or one that features extra configurable buttons? It's best to decide these key issues before you shop for the mouse. No matter what type you select, you'll want to check out the mouse's DPI (dots per inch) rating, which is a measure of the sensitivity level of the mouse's optical or laser beam. The higher the DPI, the more accurate your mouse movements will be. Another factor to consider is how comfortable the mouse feels in your hand. If the mouse offers all the features you want—but feels uncomfortable—you might not be able to operate it for long periods of time. Similarly, you should also check



Some mice come with multiple buttons and allow for custom configurations.



If you get liquid in your keyboard, it's best to immediately flip it over, let the liquid drain out, and allow the keyboard to sit for several days.

to see if the mouse is designed for right-handed, left-handed, or ambidextrous use.

Q: I've spilled liquid on my keyboard. What can I do to get the liquid out? And as long as I'm doing some keyboard house-keeping, how do I clean the debris out from under the keys on my keyboard?

A: Electronics don't mix well with dust, crumbs, and liquids. Unfortunately, our input devices are often under threat from all three, especially if we snack or drink our morning coffee in front of the PC—and who doesn't? Liquids are probably the biggest threat to keyboards because of the open spaces between the keys. If you do spill on your keyboard, you'll want to turn the keyboard over in one quick motion and leave it upside to let the liquid

drain away from the keys. Although shaking the keyboard may seem like a reasonable and natural solution, it's likely that shaking will only further spread the troublesome liquid over the interior of the keyboard. Instead, we recommend letting the keyboard sit for a few days in a cool, dry place before using it again. Follow the same advice if you spill water on your mouse.

Dirt, dust, and crumbs, on the other hand, are a different story. If you accumulate enough of the material in one spot on a keyboard or mouse, the buttons may no longer function.

When you clean a keyboard, you can dislodge a surprising amount of dirt, crumbs, and other grunge simply by turning it over and giving it a few good shakes. That said, it'd be best to then use a can of compressed air to blow any remaining debris out from beneath the keys. ●

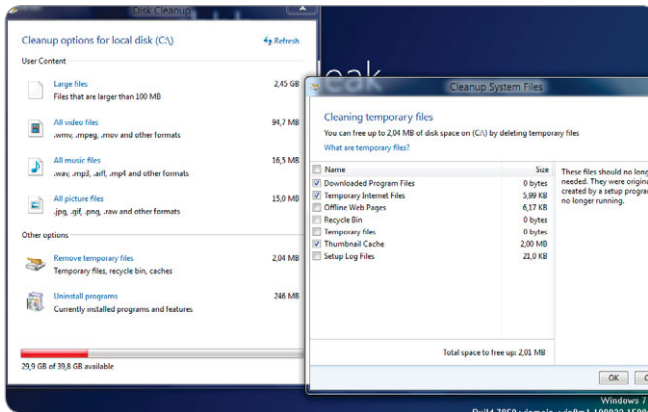
STAPLES **easytech**

Need More Help?

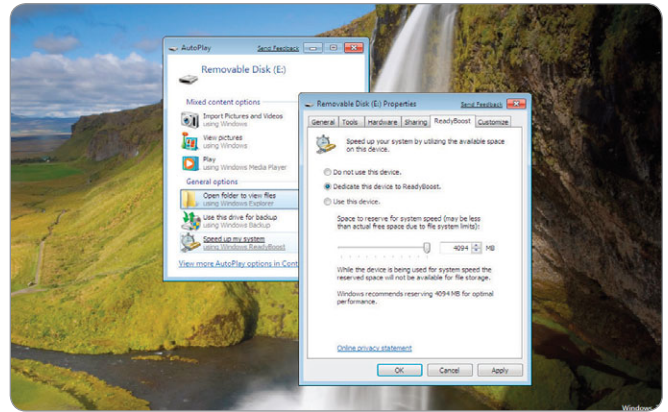
Can't find a solution to your problem? You can always take your computer or other device into Staples for help. You can also order Staples EasyTech help online, and arrange for an EasyTech associate to troubleshoot remotely via the Web or even come to your home to work on your device. Go to www.staples.com/easytech or call 1.800.378.2753.

Speed Up Slow PCs

Get Your PC Back To Working Like It Used To



Windows 8 can help you clean up temporary and system files that applications may leave on your computer.



ReadyBoost can utilize flash storage to improve the speed of your computer.

Speed is the key to making sure you can be as efficient and productive as possible. It's also important if you need to run the newest software and applications. However, a variety of factors can affect your computer's performance and make it more difficult and more time-consuming to complete even the simplest tasks. Luckily, there are many ways to either increase your computer's speed or remove the barriers that are preventing it from performing up to its potential. Here are a few tips and tricks that may help you get back up to speed.

Clean Up Your Hard Drives

In some cases, a slow computer could be the result of a full hard drive. Computers not only use on-board memory (RAM) to run software and applications, they can also use portions of the hard drive, especially when RAM runs short. If you're running out of storage, then your computer won't have access to these

additional resources and you might notice a decrease in speed. It's easy to find unneeded documents and files to delete, but you may also be able to delete entire programs if you don't use them anymore.

Windows has a built-in feature called Disk Cleanup that will help you find non-essential files to delete. In Windows 7, go to the Start menu and click All Programs, Accessories, System Tools, and Disk Cleanup. If you run Windows 8, you can type **Disk Cleanup** and select it from the Search results. It will let you know how much space you can free up. You also have the option of seeing what it wants to delete, so it won't accidentally remove important files.

When an otherwise decent computer starts running slowly, you should also check to see if there are any programs running in the background. You can see which ones are running by holding down CTRL + ALT + DELETE and selecting Start Task Manager. Click the Applications

tab and you'll see all of the programs that are currently running. Some applications start running in the background as soon as you turn on your computer; preventing unnecessary programs from doing this will also help increase the speed of your PC.

Scan For Viruses & Spyware

Some of those programs running in the background could actually be viruses. Many malicious applications appear to be legitimate programs, so you may not recognize them at first. Malware, spyware, and other viruses can slow down your computer in addition to posing a security threat, so it's a good idea to run an antivirus scan if your computer isn't as efficient as it could be.

Norton 360 from Symantec provides you with a suite of Norton's security utilities that you can control from a single interface. You'll enjoy PC security that provides real-time protection when you're emailing, surfing the Web, and chatting with



Norton 360 helps you remove viruses, and it also offers software that can increase the speed of your computer.



Consider upgrading to Windows 8, which boots up and loads files very quickly.

friends online. A firewall will help block potentially dangerous programs from reaching your system. Identity protection warns you when visiting unsafe websites and can prevent others from hacking into your PC. A PC tune-up utility completes the suite by helping you find problems may be slowing down your PC.

Tools To Increase Speed

If you've already tried cleaning your hard drive and scanning for viruses, but your computer still isn't as fast as you'd like, there are a few free tools you can try that may help. One of these tools is a Microsoft utility called Windows ReadyBoost, which uses additional memory from flash drives or memory cards to increase the speed of your Windows 7 or Windows 8 computer.

To use ReadyBoost, all you need is a flash drive or memory card with at least 1GB of free space that can be dedicated to ReadyBoost. After you connect it to your computer and set it up, ReadyBoost will use that extra memory to run software and applications. Some memory devices indi-

cate on the packaging that they will work with ReadyBoost. You can turn ReadyBoost on at the Autoplay dialog box that appears when you first plug in the external drive. Click General options and select Speed Up My System. Then, select the ReadyBoost tab and select Dedicate This Device To ReadyBoost.

Upgrade Your OS

Something you may not initially think of when you first notice your computer is slowing down is whether or not your operating system and application software are up-to-date. Software companies release regular updates for their products, and many operating systems have downloadable service packs that can improve performance and may even help your computer use available resources more efficiently.

There may be some situations where an update won't help because your operating system is simply outdated. If you or your company uses the latest and greatest software and you have been using the same OS for more than four or five years, it

may be time for an upgrade. This is a good alternative to replacing entire computer systems, if you know your hardware is capable of running the newer system software and applications that you need.

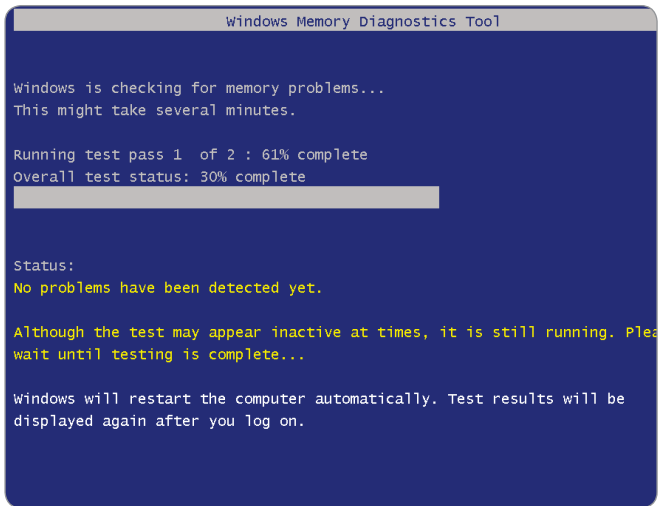
Evaluate Your Hardware

If you've exhausted all other options, then the reason for your computer's slow-down may be hardware-related. All software titles show the minimum and recommended system requirements needed to run on your computer. If the desktop PC's specs don't match up, then it may be possible to upgrade components, including extra RAM, more powerful graphics cards, and newer hard drives or other components in aging systems.

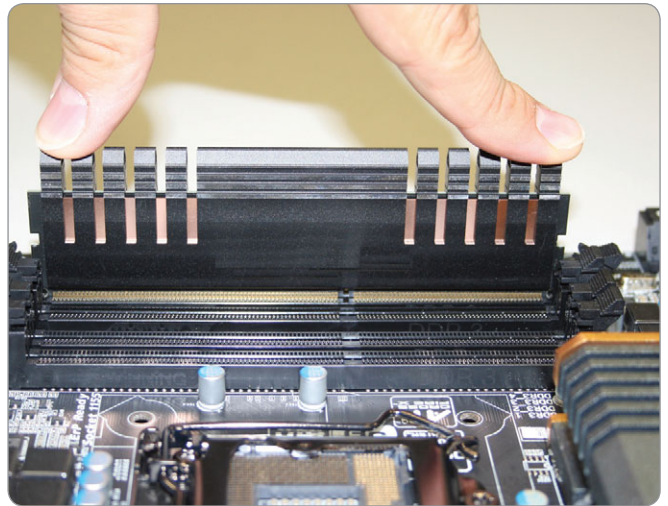
Of course, if your computer is five or more years old, it may not be compatible with certain components, and new parts may therefore not do enough to increase performance. (And it isn't always easy or possible to upgrade laptops.) In that case, it may be time to invest in new systems that have the latest hardware, software, and OS. ●

Test Your Memory

What To Do When Bad RAM Ruins Your Day



Windows Memory Diagnostic can check for errors in your system memory.



Reseat the memory by pressing down firmly until the tabs click shut. (Example shown here is for a desktop.)

Damaged memory can trigger crashes during memory-intensive operations, such as when you're installing Windows, compiling video, editing photos, or playing video games. Data stored in RAM can also become corrupted, resulting in application errors—or worse, the Blue Screen Of Death. We'll explain how to determine whether your RAM has been corrupted or damaged.

Memory Check

You can use the Windows Memory Diagnostics tool in Windows 7 and Windows 8 to determine if the memory is faulty. To run the utility in Windows 7, click the Start button and enter **memory** in the Start Search Bar. Under Programs, select Windows Memory Diagnostics. At

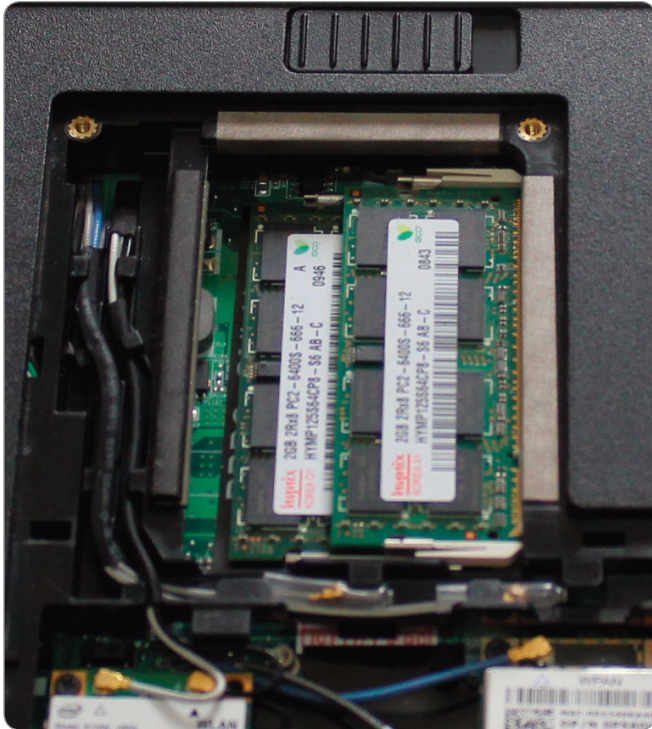
the dialog box, you can choose Restart Now And Check For Problems or Check For Problems The Next Time I Start My Computer. Either way, you'll need to restart your PC to run the utility. If you're running Windows 8, type **control panel**, and select it from the Apps section. Click System And Security, choose Administrative Tools, and select Windows Memory Diagnostic. Choose Check For Problems The Next Time I Start My Computer and Windows 8 will do so.

Error Resolution

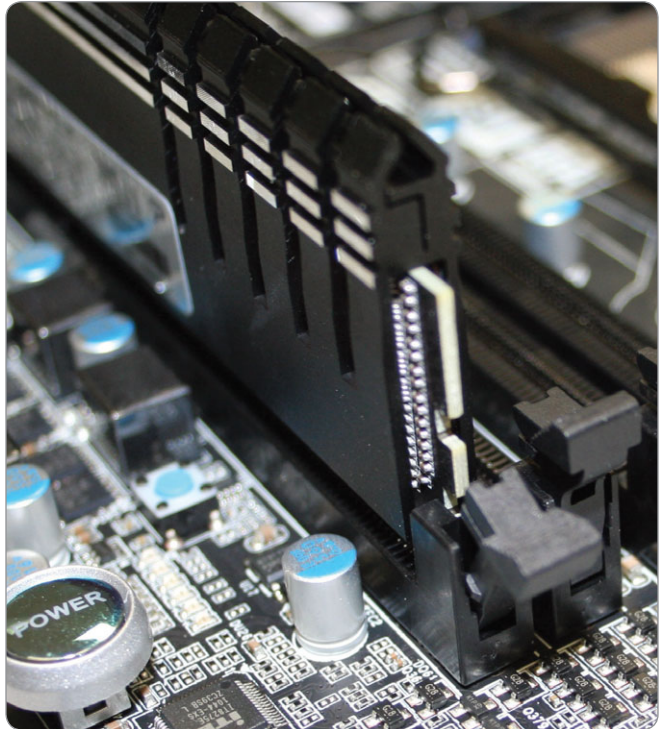
Let's say that Windows indicates that a memory module is faulty. Depending on the nature of the problem, Windows may be able to narrow down the issue to a specific module. To troubleshoot a given

module, start by removing and re-seating the memory to ensure it's all the way in the slot. To do so with a notebook, you'll need to look through the owner's manual and find the panel that hides the modules. Typically, you'll need to unscrew two or more screws that hold the cover in place. Push on the clips holding the memory, and the module should spring up to let you lift it out of the slot. To reset the memory, insert it at a 45 degree angle, and press it in until nearly all of the gold pins are in the socket. Repeat this process for each RAM module in the notebook. Restart the notebook and see if you've resolved the problem.

With a desktop PC, you'll want to begin by powering down the computer and removing the power cable. Remove the case's side panel



Using a mini Phillips screwdriver, you should be able to remove the back cover of the laptop panel.



Verify that the locking tabs are disengaged before attempting to remove the old RAM modules.

to access the motherboard. Discharge static electricity by touching a metal portion of the case before touching any of the internal components. Next, locate the DIMM slots on the motherboard. They're typically labeled, and they're long and narrow and generally appear adjacent to the processor socket. To remove your existing memory modules, press your thumbs firmly on the tabs at either side of the slot so that the tabs rotate away from the edges of the module. You can reseat the module by lining up the notch in the module with the key in the slot. Then, gently but firmly press straight down on the new module until it slides into place. Repeat this process for each new module you install.

Once the memory is resealed, try running the Windows Memory Diagnostic to see if the problems re-occur. If they do, you'll likely need

to replace the module with a new one. Note that most memory modules are backed with a lifetime warranty, so you should be able to get a replacement. If not, you'll likely need to invest in a new memory kit, which provides you with a set of matched modules that are engineered to work together.

Quick Fix

Most desktop PCs and laptops include multiple memory modules. It's possible that only one of the sticks of RAM is causing the problem, so try removing one and see if that resolves the issue. Continue to swap out the memory

until you find the stick causing the problem.

Final Thoughts

If the new module doesn't solve your problem and you've tried the RAM in a different motherboard slot, the issue is more than likely with some component other than your memory. ●



Need More Help?

Can't find a solution to your problem? You can always take your computer or other device into Staples for help. You can also order Staples EasyTech help online, and arrange for an EasyTech associate to troubleshoot remotely via the Web or even come to your home to work on your device. Go to www.staples.com/easytech or call 1.800.378.2753.



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New & Noteworthy

Here, you'll find an eclectic assortment of tech and office items that are both useful and interesting, fun and practical. All of these are available at your local Staples store or on the Staples website (www.staples.com). Face it, you need some of these things!



3M™ LCD Monitor 20.1"
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Apple EarPods w/
Remote & Mic

AVerVision U15
Document Camera



Buffalo 410D
Network Attached
Storage



AVerVision U15 Document Camera

If you have lots of documents to scan, you might be better off using a document camera instead of a scanner. (This is especially true if you're copying pages out of hardcover books, which tend not to lie flat on a scanner bed.) The AVerVision U15 document camera is USB-powered, and can be used to replace your overhead projector, scanner, and even your webcam. (Yes, there's even a built-in mic.) With the U15, you can shoot an area 16.96 X 10 inches from a height of 18.7 inches.

3M LCD Monitor 20.1" Wide-Screen Privacy Computer Filter

If you're worried about data security (and you should be), then consider a privacy filter for your monitor(s). This one fits a 20-inch wide-screen monitor, but 3M makes many sizes, some suitable for laptops. Keeps private info safe by restricting the view: Only persons directly in front of the monitor can see the image on the screen. The filter is made in the U.S.A. and includes a one-year warranty.

Apple EarPods

What can we say? It's from Apple, so we know that A) it's not cheap, and B) it's awesome and worth every penny. Apple EarPods are designed to rest comfortably inside (and to stay inside) a variety of ear shapes and sizes. Their overall audio quality is excellent, rivalling high-end headphones that cost much more.

Buffalo 410D One-Drive, 3TB Network Storage Server

Perfect for providing fast shared 3TB storage and backup of files for all computers at your home and workplace. This model includes one drive bay populated by a 3TB drive. It connects to your network using gigabit Ethernet and boasts transfer speeds up to 100 MB/s, nearly twice that of a standard NAS or USB drive. The 410D includes a USB port for backup or for connecting a printer or additional drive directly to the device. Supports CIFS/SMB, AFP, HTTP/HTTPS, FTP/FTPS/SFTP, and NFS. (Variants of this model are available up to 4TB.)



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